

THE CHOICE OF OPERATIONS IN THE TREATMENT OF PEPIC ULCER

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It requires a good deal of assurance to state the choice of operations in the treatment of peptic ulcer when there seems to be, even at the present time, so much difference of opinion regarding the matter. Like all of those doing research in this line, I have been seeking the ideal method of treatment and have not found it, but in the course of my search I have gathered impressions which undoubtedly have shaped my present attitude toward the treatment of this disease. These impressions I shall not relate but I frankly may say that they have resulted in an attitude toward the surgical treatment of peptic ulcer which may be called conservative. I have critically examined them in the light of my own experience and the experiences of others as gathered from the literature, and I shall present the conclusions I have reached.

Not the least difficult part of the whole subject is the attempt to appraise the many conflicting results which occur in the literature. The highly satisfactory results of one observer with a given method when contrasted with the far less satisfactory results of another with the same method leads to the thought that the judgment, mechanical sense, and technical skill of the surgeon, the differing criteria in judging results and constitutional and environmental factors all play a rôle in determining the value of a given surgical operation. It is a question whether to judge the merits of a surgical procedure by the best or by the poorest results obtained by its use. In my judgment it is better to judge it by the former than by the latter, and for obvious reasons.

The reader is no doubt familiar with the development of the surgical treatment of peptic ulcer. Merren, of Giesen, in 1810

first resected the pylorus in dogs, Plan, in 1879, first resected the stomach of man for gastric ulcer; Wolfier, in 1881, first performed a gastro-enterostomy for pyloric cancer; and Doyen, in 1898, first performed a gastro-enterostomy for duodenal ulcer. Since these earlier efforts surgeons have devised a large number of operative methods for the treatment of gastric and duodenal ulcer. These I do not intend to enumerate or describe in detail for they are well known. Evolved in general upon the two principles of excision of the offending lesion or of curative rest through diversion of the alimentary stream, each has had its advocates, each has won a following, none has yielded perfectly satisfactory results. Some, as gastro-enterostomy, have in spite of the newer procedures continued in use and successfully stood the test of experience; others have had periods of enthusiastic support which they have been unable to maintain. As surgeons have determined the value of these various procedures by the important test of late results, it is becoming clearer what we may reasonably expect from them from the standpoints of mortality and of late results. I shall examine the mortality and late results not of all the procedures devised but of those which may be, and have been, used in the treatment of the vast majority of ulcers. This would appear to be one of the steps toward the decision of the choice of operations for peptic ulcer. For the sake of convenience, I shall assemble the results for duodenal and gastric ulcer separately.

DUODENAL ULCER

It would appear from the accumulated experience now available in the literature with which our own experience coincides

that in the treatment of duodenal ulcer only 3 methods of attack or 3 varieties of operative procedure need be considered. These are (1) local excision of the ulcer combined with some form of pyloroplasty, (2) simple gastro-enterostomy, and (3) pylorectomy or partial gastric resection.

1. **EXCISION AND PYLOROPLASTY.**—By this I refer to an operative procedure exemplified by the operation of E. Starr Judd and that of J. M. T. Finney. In the operation of Judd the ulcer, preferably one on the anterior or ventral duodenal wall, is excised with an incision which extends through the pylorus, stomach and duodenal wall. To the excision of the ulcer is added the resection of a large part of the pyloric sphincter. The purpose of the operation is then two-fold: to remove the lesion and to prevent subsequent pylorospasm. The operation of Finney (Finney pyloroplasty) is well known and need not be described. Its important features are that it permits the excision of ulcers of the anterior and sometimes of the posterior wall; it greatly enlarges the pyloric opening, and it prevents pylorospasm by division of the sphincter. Both the operations of Judd and Finney have then the important purposes of excision of the ulcer and the prevention of subsequent spasm of the pyloric sphincter.

Results.—Judd¹ reports 1,363 cases of duodenal ulcer operated upon by this method, with a mortality of 0.4 per cent. The late results in 464 cases treated between 1924 and 1928 by excision and pyloroplasty show a satisfactory result in 90 per cent of the cases, an unsatisfactory result in 8.1 per cent of the cases.

Finney² reports 149 cases treated by his method of pyloroplasty with a mortality of 2.7 per cent. The late results show a satisfactory outcome in 86.8 per cent, an unsatisfactory result in 13.2 per cent.

From the more recent literature I have assembled the results of similar local operations or pyloroplasties in the treatment of duodenal ulcer. In 192 cases assembled the general mortality is higher than in Judd's and Finney's cases and the late satisfactory results do not average much above 60 per cent. The total is made up of scattered reports of small numbers of cases and by surgeons who evidently have not included the operation among their favorites. The results, therefore, are less likely to represent the possibilities in the methods than

those which have been obtained by surgeons who have perfected it.

2. **GASTRO-ENTEROSTOMY.**—This indirect attack upon duodenal ulcer requires no description; nor shall I discuss the relative merits of the varieties of gastro-enterostomy as anterior and posterior, long-loop and short-loop, antiperistaltic and isoperistaltic; except to say that in my opinion the posterior short or no-loop gastro-enterostomy gives the best results.

Results.—Balfour³ in a carefully studied series of 500 cases of duodenal ulcer in which gastro-enterostomy alone was done finds a mortality of 1.8 per cent. The late results after a minimum of 5 years after operation shows a satisfactory outcome in 87 per cent and an unsatisfactory outcome in 13 per cent. The follow-up studies show that the operation protects the patient against perforation of the ulcer and protects, although to a lesser extent, against hemorrhage from the ulcer. Nine per cent of the cases had one or more hemorrhages after operation but only one of the 500 patients died from hemorrhage. Recurrent ulceration after the operation occurred in 4 per cent of the cases. Gastrojejunal ulcer (marginal ulcer) occurred in 3.2 per cent in a period of ten years after operation. Space limitations do not permit the citation of the results of a large number of distinguished surgeons who have been interested in this field. I have collected 1,599 gastro-enterostomies for duodenal ulcer from the recent literature with a general mortality of 6.8 per cent, an individual mortality which varies from 2.1 to 10 per cent. The general late results show that in 85 to 92 per cent satisfactory relief from symptoms has been obtained in American clinics, from 65 to 75 per cent in German clinics. Gastrojejunal ulcer has been a late complication of the operation in from 1.6 to 7 per cent in the experience of various surgeons. In addition to these I have collected 1,490 cases of peptic ulcer treated by gastro-enterostomy in which the distinction between duodenal and gastric ulcer is not made. The results may be expected to be less satisfactory than those for duodenal ulcer alone. Nevertheless, they show a mortality which varied generally between 2.7 and 7.7 per cent, but in two instances are 10 and 15 per cent. Satisfactory results were obtained in 80 per cent of the cases. Gastrojejunal ulcer occurred with about the same frequency as duodenal.

3. PYLORECTOMY OR GASTRIC RESECTION.—This more radical procedure for the treatment of duodenal ulcer has been employed in the hope of improving the results obtained by the simpler methods. The operation has been used less frequently in this country than in European clinics. I have collected 865 cases of duodenal ulcer from the recent literature, in which gastric resection was performed by the methods of Billroth I and II and of Polya or its modifications. The general mortality is around 12 per cent; the individual mortality varies from 0 to 25 per cent. The late results show satisfactory relief from symptoms in 80 to 85 per cent of cases. Operations as the Billroth II failed to prevent subsequent development of gastrojejunal ulcer, although the incidence of this complication seems to be lower than after gastro-enterostomy.

While I have assembled the results in only 3 procedures in the treatment of duodenal ulcer and have stated that they have been used in the great majority of cases of duodenal ulcer, it is self-evident that in certain cases combinations of procedures, such as local excision and gastro-enterostomy, may seem the operation of choice. While I have no statistics to support the statement I doubt whether the regular use of these combinations has improved the results of the individual procedures. The results of the Devine operation, I have not been able to estimate. Its use is limited to a special group of cases.

CHART 1.—DUODENAL ULCER

Author	No. of Cases	Mortality, per cent	Good results per cent	Jejunal ulcer, per cent
<i>Treated by pyloroplasty</i>				
Judd	1,363	0.4	90	.....
Finney	149	2.7	86.8	.....
Other authors	192	.....	60	.....
Total ..	1,704			
<i>Treated by gastro-enterostomy</i>				
Balfour	500	1.8	87	4
Other authors	1,599	6.8	Amer. 88 Ger. 75	1.6 to 7
Total ..	2,099			
<i>Undifferentiated peptic ulcer treated by gastro-enterostomy</i>				
American and European authors ..	1,490	5.2	80	4 to 7
<i>Duodenal ulcer treated by gastric resection</i>				
American authors ..	237			4.1
		12	80 to 85	
European authors	628			....
Total ..	865			

GASTRIC ULCER

There has been a general agreement that the surgical results in the treatment of gastric ulcer are less satisfactory than in duodenal ulcer. This and the known greater tendency of gastric ulcer to undergo malignant change has led surgeons to adopt a more radical attitude toward ulcer of the stomach. While the trend in general in the treatment of duodenal ulcer has been toward conservative operations, the trend of late years in gastric ulcer has been toward resection of the stomach. In the treatment of gastric ulcer four methods of procedure need be considered, excision and pyloroplasty, gastro-enterostomy, excision and gastro-enterostomy, and gastric resection.

1. EXCISION AND PYLOROPLASTY.—This operation is applicable to lesions at or near the pylorus. It is difficult to obtain from the literature any but scattered reports of small numbers of specified gastric ulcers treated by this method. The series of Finney² is the largest I have found and because of his long-continued interest in this operation and his perfection in its technic probably represents the best results that may be expected from this method. In 102 cases of gastric ulcer the mortality was 8.8 per cent and satisfactory results were obtained in 83.9 per cent.

2. GASTRO-ENTEROSTOMY.—Gastro-enterostomy alone recently has probably been used most commonly in the ulcers near the pylorus and in those high upon the cardia in which resection of the stomach is inadvisable or impossible. In 641 gastric ulcers treated by gastro-enterostomy the general mortality in the larger series of cases is 8.9 per cent, the individual mortality varies between 3 and 13 per cent. Satisfactory late results were obtained in 71 per cent of these cases. Individual results varied between 50 and 82 per cent, with the majority of individual results over 75 per cent. As I noted in discussing duodenal ulcer, I have collected 1,490 cases of undifferentiated peptic (gastric and duodenal) ulcer treated by gastro-enterostomy with an average mortality of 4.8 per cent and with good results in 80 per cent. The more favorable mortality rate and the better late results in the latter group may be due to the duodenal ulcers included; but taken together these two groups of cases seem to show what results may be expected from gastro-enterostomy in gastric ulcer. Balfour³ has

made an interesting study of a selected group of 100 cases of gastric ulcer in which the lesion at operation was deemed irremovable and in which gastro-enterostomy alone was performed. The mortality following gastro-enterostomy was 3 per cent. The late results after a period of 5 years or more showed 79 per cent satisfactory results. The operation afforded almost complete protection against perforation and obstruction and a high protection against hemorrhage. Gastrojejunal ulcer did not occur in a single case. The development of carcinoma presumably in an unremoved lesion was established or suspected in 6 cases. The series shows what unexpectedly good results may be anticipated from gastro-enterostomy alone. While gastrojejunal ulcer did not occur in this series, it has occurred in the experience of others in perhaps 4 to 5 per cent of the cases.

3. GASTRIC RESECTION.—The operation is used for the lesions proximal to the pylorus by preference by some, by others in cases in which excision and pyloroplasty or excision and gastro-enterostomy seem inadvisable. It is used also in lesions further proximal upon the lesser curvature and fundus, the operation involving the removal of a large portion of the stomach. The types of operation commonly employed are the Billroth I, Billroth II, and Polya with its various modifications. It has been difficult to assemble the results separately of the lesser and greater gastric resections and I shall have to consider them together. The operations have had a greater vogue in Europe, particularly in Germany, than in this country, although a few surgeons here have taken them up enthusiastically. From the literature I have collected 430 cases of gastric ulcer treated by gastric resection. The general mortality is 12.4 per cent, the individual mortality varies from 5 to 30 per cent. The late results show satisfactory relief from symptoms in 73 per cent of the cases. The satisfactory results of individual surgeons vary between 55 and 88 per cent. The majority of surgeons have had over 78 per cent satisfactory results. In addition to these specifically designated gastric ulcers, I have assembled 5,243 undifferentiated peptic ulcers (presumably the majority gastric) from the literature. The very large majority are from the German literature. The general mortality following gastric resection is about 7 per cent—a mortality considerably lower than that of

the majority of American authors. The individual good results vary between 50 and 95 per cent, the average being 75 per cent. One-half the individual surgeons or clinics had results of 80 per cent or better, one-half of 75 per cent or less. Gastrojejunal ulcer following operation is rarely noted in German statistics, has occurred in approximately 3 per cent of the cases in this country.

A study of these results shows that in *duodenal ulcer* the conservative operations of excision and pyloroplasty and gastro-enterostomy achieve as good results as the more radical operation of gastric resection and do so with an appreciably lower mortality. Both types of operation protect the patient to a considerable degree against hemorrhage and perforation. The question of malignant degeneration of the ulcer does not enter. The operation of gastro-enterostomy has the disadvantage that it is followed in perhaps 5 per cent of the cases by gastrojejunal ulcer; but this complication follows gastric resection also in perhaps 3 per cent of the cases. The conservative operations leave the surgeon with some more radical treatment in reserve should a recurrent ulcer or gastrojejunal ulcer develop; the radical operations leave him and his patient in difficulties.

CHART II.—GASTRIC ULCER

Author	No. of Cases	Mortality, per cent	Good results, per cent	Jejunal ulcer, per cent
<i>Treated by pyloroplasty</i>				
Finney	102	8.8	83.9	.....
<i>Treated by gastro-enterostomy</i>				
Balfour	100	3.0	79	0
Other authors	641	8.9	71	4 to 5
Total ..	741			
<i>Treated by gastric resection</i>				
American authors ..	196	12.4		
		12.4	78	3
European authors ..	234			
Total ..	430			
<i>Undifferentiated peptic ulcers treated by gastric resection</i>				
American authors ..	563	13.5		
			75 to 80	3
European authors ..	4,680	5.5		
Total ..	5,243			

In *gastric ulcer* also the more conservative procedures of excision and pyloroplasty, gastro-enterostomy, and excision and gastro-enterostomy show as good results as those obtained by large gastric resections.

The mortality following these conservative operations is appreciably lower in this country than that following the more radical operations. The German mortality for gastric resection is approximately that of the American mortality for the more conservative procedures. Even if the mortality is the same, the advantage would seem to be with the conservative operations, for they avoid the removal of a large portion of the stomach and better allow subsequent procedures should late recurrence or gastrojejunal ulcer develop.

From the standpoint purely of results a conservative attitude toward the surgical treatment of peptic ulcer would seem the part of wisdom. Other factors enter into the choice of operations for peptic ulcer which may be discussed under the following headings:

PATHOLOGY OF PEPTIC ULCER

Experience over a long period of years shows that the danger of malignant degeneration of duodenal ulcer is so slight as to be disregarded. In gastric ulcer the tendency to malignant change has long been recognized but the frequency of this change has not yet been accurately determined. From clinical observations (e.g., Balfour³) made upon patients, a gastric ulcer not removed at operation may become malignant in perhaps 5 per cent of the cases. In the German literature the percentage would seem to be less than this. From pathological studies carcinoma arises from gastric ulcer in from 5 to 10 per cent of the cases (Newcomb⁴). The number of gastric ulcers which may become carcinomatous is in the opinion of surgeons large enough to warrant the removal of all gastric ulcers if removal is not attended with too great risk, it is not large enough, in my opinion, to warrant the removal of an ulcer if the removal seriously jeopardizes the patient's life. There is no evidence that I know, that the removal by local excision is more dangerous to the individual from the standpoint of subsequent cancer than is the removal by wide gastric resection.

AGE FACTOR

Judd and others in this country have emphasized the factor of age in the treatment of gastric and duodenal ulcer. It has been observed that young individuals (under 35) do not have as good results following the simpler, more conservative

operations for peptic ulcer as do older individuals. Redwitz⁵ of Bonn, in an analysis of the late results of gastroenterostomy for peptic ulcer in 184 cases, finds that 68 were under 35 years of age, 116 were over 35 years of age. The satisfactory late results in patients under 35 are 51.4 per cent, in patients over 35, 74.5 per cent. Certain German opinion is that ulcer in the young should be treated radically, in the older, conservatively. Judd is of the opinion that ulcers in younger individuals should be excised when possible.

CHART III—PERFORATED PEPTIC ULCER

Author		No of cases	Mortality per cent	Cure results per cent
<i>Treated by simple closure</i>				
Johnston (1925)		210	35.7	75
Other authors (recent)		1,271	31.7	41
Total		1,481		
<i>Treated by closure and gastro-enterostomy</i>				
Johnston (1925)		281	20.6	75
Other authors (recent)		859	22.7	49.4
Total		1,140		
<i>Treated by closure and pyloroplasty</i>				
Johnston (1925)		24	12.5	75
Other authors (recent)		10		
Total		34		
<i>Treated by resection</i>				
Johnston (1925)		41	19.5	
Other authors (recent)		154	30.4	75.7
Total		195		

SOCIAL AND ECONOMIC FACTORS

The varying results obtained in the treatment of peptic ulcer may in part be due to constitutional, social, economic, and other factors. The ability or the desire to follow a proper postoperative regimen, the ability to prevent overwork, worry and strain, and to secure proper food are all matters which influence the results of surgical treatment. The surgeon may be influenced in his choice of operation after a proper evaluation of these factors.

These then are the considerations which, in my opinion, should determine the choice of operation in peptic ulcer. They have to do with the relief of symptoms with the lowest mortality and the greatest preservation of normal structures, the protection against complications and against recurrence of ulceration. With them in mind the choice of operations in peptic ulcer would be as follows:

DUODENAL ULCER

A For the ulcer appearing on the anterior duodenal wall in cases without

such adhesions about the pylorus and duodenum as may prevent proper delivery and exposure of the duodenum, the operation of excision and pyloroplasty by the method of Judd, or if one has mastered its details, by the method of Finney, is preferable. If adhesions or anatomical considerations make adequate delivery or exposure of the duodenum difficult, gastro-enterostomy is preferable.

B. For the ulcer of the anterior and posterior wall, if both are recognized before beginning the operation, gastro-enterostomy would seem preferable. If the posterior lesion is discovered only after the opening of the duodenum done for the excision of the ulcer of the anterior wall and can be excised, the operation becomes that of excision and pyloroplasty. If it cannot be excised, then the operation develops into excision of the ulcer of the anterior wall and gastro-enterostomy.

C. For the cicatricial-ulcer-producing pyloric obstruction, gastro-enterostomy is preferable.

These procedures will serve for the treatment of the very large proportion of duodenal ulcers. The occasional ulcer may demand pylorotomy or gastric resection. For the duodenal ulcer with repeated massive hemorrhages threatening life none of the operations above mentioned suffice, nor will the exclusion operation of Devine. These ulcers, fortunately rare, lie upon the posterior wall of the descending portion of the duodenum and have eroded one of the large branches of the pancreaticoduodenal artery. In one case of this sort during the past year a direct exposure of the ulcer by longitudinal incision of the duodenum showed an open artery in the base of the ulcer of such size that nothing short of an encircling ligature could control the hemorrhage. In a second case death from hemorrhage occurred soon after the patient's admission and before operation was undertaken. The autopsy showed an ulcer in the same location as in the previous case, in the base of which was a large open artery.

GASTRIC ULCER

A. For the ulcer at or near the pylorus in which the operations of Judd or Finney are possible, either of these operations would seem preferable.

B. For the ulcer too far proximal to the pylorus to permit excision and pyloroplasty, excision and gastro-enterostomy if fea-

sible, or pylorotomy by the methods of Billroth I or II and of Polya, if not feasible, would seem desirable. In certain cases under certain conditions simple gastro-enterostomy will be the operation of choice. These conditions have to do with the dangers to the patient of other procedures.

C. For the ulcer higher on the lesser curvature local excision and gastro-enterostomy is the operation of choice. The large gastric resections done for ulcer located in this region of the stomach seem unwarranted from the standpoint of results.

D. For the ulcer high upon the lesser curvature so near the esophageal opening that excision and gastro-enterostomy is impossible, simple gastro-enterostomy is the operation of choice.

These operations again will serve for the large majority of gastric ulcers. It is clear, as I stated in connection with duodenal ulcer, that the occasional ulcer will demand some other treatment than herein outlined.

In the treatment of peptic ulcer the operative method while of great importance, is of no greater importance than the experience, the skill, and the judgment of the surgeon. It is apparent that in the treatment of peptic ulcer the surgeon must approach each individual case with no preconceived ideas of the method he will employ. He must, on the contrary, be familiar by training and experience with a variety of methods all of which he can apply with equal facility after the lesion has been exposed. A study of the immediate mortality following operation for peptic ulcer shows that complications directly attributable to the operation itself, pulmonary complications, and cardiorenal complications have been the three major causes of death. The importance of these three factors varied in different series but in some the complications attributable to the operation accounted for more than two-thirds of the mortality. This is an indication that the proper performance of the operative procedure is an important factor in the immediate and late results.

GASTROJEJUNAL ULCER; RECURRENT ULCER

A study of the results of 17 authors from various countries shows that recurrent or jejunal ulcer follows *gastro-enterostomy* in from 0.9 to 6.9 per cent of the cases with an average incidence of 3 per cent. Berg,⁶ however, states that the

incidence is 30 per cent. A study of the results of 8 authors shows that recurrent or jejunal ulcer follows *partial gastrectomy* in from 0.6 to 60 per cent with an average of 19 per cent. Gatewood, however, in his experience found an incidence of 10 per cent. The operative procedures which have been employed in the presence of this unfortunate complication have been (1) gastro-enterostomy (in ulcer following a primary Billroth I), (2) disconnection of the gastro enterostomy and resection of the gastrojejunal ulcer, (3) disconnection of the gastro-enterostomy, resection of the gastrojejunal ulcer, and gastroduodenostomy or pyloroplasty, and (4) disconnection and gastric resection by the methods of Billroth I or Polya.

It has been impossible for me to appraise from the literature the merits of these various procedures. All of them are serious procedures from the standpoint of mortality and almost all observers have had a higher mortality following these secondary operations than following even the major primary operations. The cause of the occurrence of gastrojejunal ulcer is not altogether clear. It would appear doubtful that the technic of the primary operation (kind of suture material used, etc.) is a major factor in its production, and it would seem that certain individuals have a tendency to ulcer formation beyond the average. This would seem one argument for a very careful consideration of the primary operative procedure.

It is obvious that the type of secondary operation selected in any given case will depend upon the kind of primary operation performed and in some such a way as follows:

A In jejunal ulcer following a primary Billroth I or Polya operation, posterior gastro enterostomy may appear to be the simplest and best procedure. It should be combined with a very careful medical regimen for there is no assurance that another ulcer will not form at the site of the gastro enterostomy.

B In gastrojejunal ulcer following primary gastro enterostomy it may be found at the secondary operation that the original ulcer is apparently completely healed and the pylorus unobstructed. Disconnection of the gastro enterostomy, excision of the jejunal ulcer, and closure of the wounds in stomach and jejunum combined with strict medical regimen may best meet the indications.

C In other cases of gastrojejunal ulcer following primary gastro-enterostomy, one of the following operative procedures may best meet the indications: (a) Disconnection of the gastro-enterostomy, resection of the gastrojejunal ulcer and pyloroplasty, (b) disconnection of the gastro enterostomy, excision of the gastrojejunal ulcer, and gastric resection according to the method of Billroth I or of Polya and its modifications, and (c) large gastric resection at the level of the previous gastro-enterostomy with the Polya type of reconstruction.

D In gastrojejunal ulcer following a primary gastric resection by the method of Billroth II, the disconnection of the gastro-enterostomy, excision of the ulcer and reconstruction by the method of Polya if possible may best meet the indications.

As I have stated, I have been unable to discover from the literature the merits of these various procedures. It is simple to state what may be done in recurrent or gastrojejunal ulcer following various primary procedures, it is far from simple very often to perform the operation when confronted with the actual conditions. A survey of the literature would suggest that the consensus of opinion in this country is in favor of the simpler, more conservative procedures such as disconnection of the gastro enterostomy, excision of the ulcer, and pyloroplasty rather than the larger gastric resections, and with this view I am in accord. But as I have stated in discussing the primary operations for peptic ulcer, one should approach the secondary ulcer without preconceived ideas as to its treatment, rather one should be prepared to perform one of several procedures which best meets the situation.

PERFORATED PEPTIC ULCER

In a paper on peptic ulcer written in 1925, I reported the results of a study of perforated ulcer made by Dr. Floyd B. Johnston,⁸ then one of my associates. The study included 39 cases of acute perforation at the Cincinnati General Hospital and 1,464 cases collected from the then recent literature. In our own series the mortality in cases operated upon up to 12 hours after perforation was 22 per cent, in cases operated upon between 12 and 24 hours after perforation it was 66 per cent, and in cases operated upon over 24 hours after perforation it was 71 per cent. In the 1,464 cases collected from the litera-

ture the mortality in operations after the same periods of time was almost identical, *i.e.*, 22 per cent, 60 per cent, and 73 per cent, respectively. An analysis of the operations performed with the immediate mortality and late results showed the following:

(a) Of 710 patients in whom a simple closure of the perforated ulcer was performed, 254 died—a mortality of 35.7 per cent. Of the 456 who recovered, 365 (80 per cent) reported their late results. Of this number, 25 per cent reported more or less severe ulcer symptoms, of whom 10 per cent required or were subjected to subsequent gastro-enterostomy.

(b) Of 281 patients in whom closure of the perforated ulcer was combined with gastro-enterostomy, 58 died—a mortality of 20.6 per cent. Of the 223 who recovered, 125 (56 per cent) reported their late results. Of this number, 12 per cent reported more or less severe ulcer symptoms, and of these 1.3 per cent were later operated upon for gastrojejunal ulcer.

(c) Of 24 patients in whom closure was combined with pyloroplasty, 3 died—a mortality of 12.5 per cent. Of the 21 who survived, 16 (75 per cent) reported their late results. Of this number, 24 per cent reported more or less severe ulcer symptoms.

(d) Of 41 patients in whom gastric resection was performed, 8 died—a mortality of 19.5 per cent. Of the 38 who recovered, 20 (60 per cent) reported their late results. Of this number, 6 per cent reported more or less severe ulcer symptoms.

I have again collected 3,344 cases of perforated peptic ulcer from the literature. Of this number, 1,929 cases were operated upon from 1 to 12 hours after perforation with 323 deaths—a mortality of 16.7 per cent; 1,157 were operated upon more than 12 hours after perforation with 643 deaths—a mortality of 55.5 per cent. It will be seen on comparing these figures with the preceding that the mortality in acute perforation of peptic ulcer has declined slightly since the preceding figures were assembled. An attempt to analyze this series of cases from the viewpoints of the kind of operations performed, their mortality and late results, has met with only partial success; for in many cases this information is lacking. Such data as I have been able to assemble may be stated as follows:

(a) In 1,271 patients upon whom simple closure of the perforation was performed the primary mortality was 31.7 per cent and good results were obtained in 41 per cent of those who survived.

(b) In 859 patients upon whom closure plus gastro-enterostomy was performed the primary mortality was 22.7 per cent and good results were obtained in 49.4 per cent of those who survived.

(c) In 10 patients upon whom closure combined with pyloroplasty was performed, neither the primary mortality nor the late results are given.

(d) In 154 patients upon whom a gastric resection was performed, the primary mortality was 30.4 per cent and good results were obtained in 75.7 per cent of those who survived.

A consideration of these findings leads to a series of conclusions with which no doubt the reader is perfectly familiar.

1. The time element, meaning by this the elapsed time between perforation and operation, is the most important single factor in determining the primary mortality in acute perforation of peptic ulcer. It is of course understood that the term "time element" is used as a general term and that the factor which in large measure determines the primary mortality in acute perforation of peptic ulcer is the kind and virulence of the viable organisms which escape into the peritoneal cavity following perforation. Should these be virulent streptococci giving rise to a streptococcic peritonitis, the mortality following closure 2 to 4 hours after perforation is, in my experience, higher than following closure 10 to 12 hours after perforation in the case of less dangerous nonvirulent organisms.

2. Neither our own experience nor the experience of others as revealed in the literature indicates that simple closure of the ulcer has been attended with a lower primary mortality rate than closure combined with gastro-enterostomy. Indeed, in general, the mortality following closure plus gastro-enterostomy is lower than that following simple closure. It is difficult, however, to imagine that the addition of a gastro-enterostomy has actually saved lives and it must be presumed that closure and gastro-enterostomy have been performed, in general, upon patients in better condition than simple closure.

3 The idea, often earlier expressed, that perforation of an ulcer cures the ulcer is not borne out by accumulated experience. As indicated above, fully 25 per cent of the patients who survived simple closure of the perforated ulcer reported more or less severe ulcer symptoms a lesser number who survived closure and gastro-enterostomy and gastric resection. A comparison of the late results of simple closure and closure plus gastro-enterostomy so far as they are available does not, however, show a sufficiently striking difference to warrant advocating one operation in preference to the other, and if this is true, the simpler operation would seem the operation of choice. Gastric resection while it appears to have given better late results than either

of the simpler procedures can scarcely be considered as a measure for general adoption.

For the acutely perforated ulcer simple closure would appear to be the operation of choice. If closure results in obstruction at the pylorus, closure should be combined with gastro-enterostomy.

525 E. 68TH STREET

REFERENCES

- 1 Judd and Hazeltine *Trans Am S Assoc* 48 151, 1930
- 2 Linney and Hamman *Trans Am S Assoc* 48 185, 1930
- 3 Balfour *Trans Am S Assoc* 48 146 1930
- 4 Newcomb *W Int J Surg* 20 278 1932
- 5 Redwitz *Discl J Clin* 240 1 1933
- 6 Gatewood *Trans Am S Soc* 48 142 1930
- 7 Berg *Ann Surg* 92 340 1930
- 8 Johnston *Med Bull Cincinnati Univ* 51 14 1926

BRITISH MATERNAL DEATHS RISING

More babies are being saved but more mothers lost.

This sentence tells in a nutshell the situation of infant and maternal mortality in Great Britain. The newly established British College of Obstetricians and Gynecologists was addressed a few weeks ago by Stanley Baldwin, former Prime Minister, who remarked that the country did not realize that while during the present century the general death rate had been reduced by about one third tuberculosis reduced by an equal amount and infant mortality by nearly one half the maternal death rate was slightly increasing.

It had been shown that half of the maternal deaths in Great Britain were preventable. That was, said the former Premier, a terrible indictment. It was extraordinary that the country had for so long taken these deaths like accidents on the road as a matter of course. They were in fact a reflection on the intelligence of the people and on humanity.

The London correspondent of the *AMA Journal* who reported this, also reported a recent

meeting of more than 1000 women in London arranged by the Maternal Mortality Committee. Delegates attributed the mother mortality rise to a wide spread condition of malnutrition prevailing during the depression. Lady Barrett, gynecologist of the London School of Medicine for Women suggested as an effective means of dealing with malnutrition the establishment of a dining room for nursing mothers operated in connection with ante partum clinics. The resolution was carried unanimously, as were some others to the effect that allowances should be paid in all maternity cases on the lines of national health insurance that all local authorities should provide a complete gynecologic service, which would include advice on birth control, and that the Minister of Health and the British Medical Association should be asked to receive a deputation urging wider provision of midwifery services and fuller maintenance and development of child welfare and maternity services.

MEDICAL LIFE IN MISSISSIPPI

Those who think that poetry has gone from modern life, especially from the life of men of cold science like the doctors are invited to read a Mississippi County report in the *New Orleans Medical and Surgical Journal*. It can almost be set to music. It runs thus: Dr and Mrs Laurence J. Clark are the proud hosts to a most noted celebrity who came as an abiding guest to their home and hearts at 9:00 A. M. November 2 in the person of a tiny little lady previously unknown to them. She is making her first visit and as they fondly and joyfully welcomed her they asked "What is life?" and her reply was, "Tis to be born."

A helpless baby, to greet the light with a sharp wail as if the morn foretold a cloudy noon

and night, to weep to sleep and weep again, with sunny smiles between, and then?"

In the same report we read that the County delegates to the meeting of the Southern Medical Association in San Antonio Texas will put on a rodeo on the night of the "big show." It appears that Dr. Edley Jones will ride the "bucking broncho," Pierre Robert as a famed matador will fight the wild man, Guy C. Jarratt will administer pasteurized milk and cod liver oil to the little doggies, William Purks and "Señor" with his guitar will serenade the "Señorita" and old Mich Smith will endeavor to "show them the way back home when all is over 'Over There'."

DIAGNOSIS AND TREATMENT OF ANEMIA

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For physicians engaged in the actual practice of medicine it is extremely important to view all phases of a subject in proper perspective. This is difficult and no less so with the subject of anemia than with any other. This difficulty is forgotten by many writers, including some of the leaders in hematology who, in their laudable enthusiasm over special issues, often assign to them, by implication at least, an unwarranted importance. We have long since learned that a reactionary or ultra-conservative attitude is not conducive to progress, because ideas which have seemed almost fantastic when first reported have led frequently to revolutionary advances. On the other hand, an ultraradical attitude is apt to result in a loss of the good from the older order and the adoption of many new procedures which eventually prove valueless.

In this discussion the aim will be to seek a course midway between these two attitudes in bringing out points relating to diagnosis and treatment which have seemed most important to the author. With due regard for the complexity of many of the issues involved, it may be said at the start that for the majority of cases the procedures of proven value are often simpler than we are led to believe.

The problem that first presents itself concerns the kind of diagnosis which will be most useful to indicate prognosis and treatment. If we consider anemia not as a disease but as a manifestation of some underlying disorder, it becomes clear that the diagnosis of greatest importance is that of the main anemia-causing factor. In the present state of our knowledge it seems wise to consider such factors broadly as disorders, diseases, and deficiencies which may be readily recognized.

With these considerations in mind it is possible to attack the problem of etiologic diagnosis with some assurance of success. In a series of 191 consecutive cases recently studied, 79 per cent could be classified on the basis of what was thought to be the major etiologic factor. The classification is given in Table I.

It will be noted that 54 per cent were grouped under the heading of active causes of which hemorrhage and infection accounted for the greatest number. One might be surprised at this large percentage since modern literature tends to minimize this group. Twenty-five per cent were grouped under passive causes or nutritional deficiency. Pernicious anemia cases fell in this group. In 21 per cent the cause was not classified, although a definite or probable diagnosis was made in half of them.

In other words, the great majority of cases could be classified in such a way that the primary therapeutic indication seemed rather simple. In only 11 per cent were we more or less completely in the dark as to this.

With our objective before us, the next question concerns the most direct method of arriving at the diagnosis. The recent overemphasis of modern technical laboratory procedures to solve clinical problems has resulted in some loss of confidence in the history, physical examination, and simpler accessory measures. This seems unfortunate, but with the present trend back to common sense there is hope that this situation will correct itself.

TABLE I.—ANEMIA CLASSIFIED AS TO CAUSE

	No. of cases	Per cent
I. Active causes	103	54
1. Hemorrhage	44	23
2. Infection	21	11
3. Leukemia	12	6
4. Malignant tumor (hemorrhage not evident)	9	5
5. Chemical poisoning	7	4
6. Nephritis with nitrogen retention	6	3
7. Splenic hyperactivity and related phenomena	4	2
II. Passive causes (nutritional deficiency)	47	25
1. Pernicious anemia syndrome	36	19
2. Deficient food intake	7	4
3. Deficient food assimilation (achlorhydric)	4	2
III. Cause not classified	41	21
1. Definite diagnosis made	6	3
2. Probable diagnosis made	14	7
3. Multiple factors	18	9
4. No cause found	3	2

In the series of cases studied a reasonably complete history with fairly definite objectives was found, by itself, to be diag-

nostic or practically so in 35.1 per cent (Table II). Considered in conjunction with the physical examination the percentage rose to 42.9. Adding the results of the blood count with examination of the stained film the total reached 61.8 per cent.

Naturally, other measures were carried out and they were often of definite assistance either in confirming the diagnosis or in excluding other possibilities. In the remaining group of 16.8 per cent of cases, where a definite etiologic diagnosis was made eventually, the diagnostic procedures varied. They included tests for occult blood in feces, gastric analysis, x-ray, surgical exploration, bacteriologic examination, chemical determinations, biopsy, results of therapeutic procedures, and necropsy.

In brief, there was only about one-fifth of the cases in which a diagnosis on the basis of major etiology could not be made by the simplest of well-recognized clinical procedures.

Of great interest to the author was the fact that no test in this group could be called new. However, there is one that has acquired a new importance. That is gastric analysis as applied to conditions other than pernicious anemia.¹ Abnormality of gastric secretions as evidenced by an absence of hydrochloric acid seems to offer a logical explanation for nutritional deficiency in cases where no other anemia-causing factor can be found.

One can hardly leave the question of diagnosis without some mention of the classifications of anemia based on the various combinations of cell number, cell size, and saturation with hemoglobin. These

indices involved. They offer very little information from the etiologic point of view, except in the group where the cells are of large size. Practically all pernicious anemia cases and very few others will be found in this group. But even here these tests merely confirm observations made on the stained blood film. On the other hand, this type of study undoubtedly has very definite value. It serves to emphasize the importance of macrocytosis in the diagnosis of pernicious anemia. It affords an excellent method of analyzing certain features of the blood state. It shows that the same major etiologic factor affects the blood differently in different cases, thus directing attention to possible secondary factors. Whether or not this will be of aid in indicating the form of treatment will be discussed later. It is certain, however, that its part will be comparatively small when considered in the light of the major therapeutic indications and it is these that deserve notice.

As pointed out earlier, 79 per cent of the cases in this series were classified on the basis of the major cause. Whether or not such a high percentage would be found in the general run of anemia cases cannot be said, but surely it would be high. The primary therapeutic indication is to attack the cause. When the cause can be removed, complete recovery from anemia follows in practically every case. It is interesting that accessory treatment with iron, liver, etc., seems of slight importance in this group, since recovery was almost equally rapid as far as could be determined in the cases that did not receive such treatment.

Where complete removal of the cause is not possible, but some alleviation is effected, definite improvement in the blood occurs. Accessory measures seem to be of value here.

When the cause cannot be removed or alleviated in any way, the results of treatment by any measures are more discouraging. However, improvement is to be expected in some cases (24 per cent in this series) by accessory measures. These measures should be used not so much to improve the blood state for itself as to elevate the patient's resistance and to support him while a temporary cause is active. This is particularly important in anemias due to infection and chemical poisoning. Besides animal protein and iron as indicated nutritional substances, transfusion of blood is often of great value.

TABLE II.—ANALYSIS OF DIAGNOSTIC PROCEDURES IN 191 CASES

Procedures	Diagnostic		Suggestive		Indefinite		Misleading	
	Cases	Per cent	Cases	Per cent	Cases	Per cent	Cases	Per cent
History alone	67	35.1	69	30.9	60	36.2	2	1.0
Physical examination alone	59	30.9	61	31.9	63	35.5	5	2.6
Blood examination alone	55	28.9	63	33.0	63	35.5	5	2.6
History or physical examination or both	82	42.9	60	31.4	45	23.0	4	2.1
One or more of the above three	118	61.8	28	14.7	41	21.4	4	2.1
All available procedures	156	81.7	14	7.3	21	11.0		

have been so popularized by the work of Osgood,² Haden,³ Wintrobe,⁴ and others that it would seem that no case study is complete without determining the various

In passing it should be said that transfusion is indicated in any anemia, whatever the cause, when the condition of the patient is so serious as to constitute an emergency.

In regard to anemias dependent upon nutritional deficiency little need be said of the therapeutic indication. Where the deficiency is in hemoglobin, iron and diet rich in animal protein are indicated, of course. In pernicious anemia, liver or some analogous substance must be supplied. It is the technic of the administration that deserves special consideration.

Iron should be given always in conjunction with a diet containing an adequate amount of protein of animal origin, such as lean meat. The author's own experience supports the evidence of many workers that the best results follow oral administration of any form of iron which will be assimilated. It is extremely effective when used in sufficient dosage. Because of its economy and solubility, iron and ammonium citrate is the favorite. It is well tolerated in doses of 2 gm. three times daily, preferably in the form of a 50 per cent solution in an agreeable vehicle. In properly diagnosed cases the results are uniformly specific and marked improvement is noted within the first month.

As to liver, almost any form is effective. We all know the difficulties involved in long-continued oral administration, however, and the advantages of intramuscular injection outweigh the disadvantages. The following procedure is highly effective: The pernicious anemia patient in relapse is given one dose of intramuscular extract* daily for three successive days followed by one injection each week until there is complete remission. Thereafter the interval between doses is lengthened according to the needs of the patient. In a group of cases, uncomplicated by cord degeneration and observed for at least two and one-half years, the average interval was about one month. It is obvious that they must be examined thoroughly at least once a month and advised to report immediately if they develop any subjective symptoms, particularly gastro-intestinal upsets.

* One dose is considered here as equivalent to 3 c.c. of Lederle's extract.

The use of hydrochloric acid has been of little apparent value.

Patients with cord changes are treated more intensively and the results are often remarkable. Improvement may be both subjective and objective.

From the point of view of therapeutic indication perhaps the most enticing problem concerns those cases in which no definite etiologic factor can be determined after a thorough search. It is in this group that careful study of cell size and hemoglobin saturation seems to have its greatest potential value. While in the end the procedure must be in the form of a therapeutic test, these determinations will indicate the logical treatment to be tried first. Those in which the average cell size is larger than normal may be given liver in the manner described for pernicious anemia with considerable hope of success. Of the remainder, those with low hemoglobin saturation usually respond to iron. In those having hemoglobin saturation more or less normal, one might think that a combination is indicated. The author's own experience, however, has been that iron alone is often extremely effective. A not unusual observation has been that shortly after the treatment is started, the red cells increase in number and size, so that an actual hemoglobin unsaturation results with the subsequent course exactly as in the low hemoglobin saturation group.

In conclusion the author wishes to emphasize the importance of a sensible attitude in approaching the anemia problem. Considered in its proper light, anemia is a symptom complex. To find and attack the underlying cause is the chief objective. The most valuable diagnostic procedures are old and tried and the therapeutic indications are clear-cut in the majority of cases. When an etiologic diagnosis is impossible, the newer methods may suggest the type of therapeutic test to be tried first.

100 HIGH STREET

REFERENCES

1. Mettier, S. R., and Minot, G. R.: *Am. Jour. Med. Sci.* 181:25, 1931.
2. Osgood, E. E.: *Arch. Int. Med.* 37:683, 1926.
3. Haden, R. L.: *Arch. Int. Med.* 49:1032, 1932.
4. Wintrobe, M. M.: *Proc. Soc. Exp. Biol. and Med.* 27:1071, 1930.

SULPHARSPIH NAMINE. ITS USE AND STATUS IN NEW YORK STATE

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SOCIAL PHASE

The prevalence of syphilis and the military and public health necessity of its control in 1917 demanded that governmental agencies should take an active interest in providing diagnostic and treatment facilities which necessarily included the distribution of the arsphenamines to all practitioners. Because of the chemical composition of arsphenamines and because of their pharmacological action involving potential dangers to life, this was a grave responsibility, but still in keeping with the policy of state governments, which permitted the distribution of biologic products to all licensed physicians.

The distribution could not be limited to skilled specialists in syphilology nor were the specialists available in such numbers as adequately to care for the patients needing public aid. For the control and ultimate eradication of syphilis, public health necessarily demands that adequate diagnostic and therapeutic facilities shall be available to all the people, in the rural as well as in the urban communities. This emphasizes the importance of the general practitioners, the men on the frontiers who see over 60 per cent of the patients with syphilis first and who should make an early diagnosis and institute immediate treatment.

The management of syphilis—the master disease—is so many sided and complicated that specialists should frequently be consulted for the best interests of the patient and the community. Provided there is trust, confidence, and close co-operation between the practitioner and the specialist, much of the routine treatment can be conducted by the general practitioner. Popularizing the treatment of syphilis does not deter in the slightest the importance and place of the specialist. Whether the patient is in a hospital bed, special service clinic, or the private practice of a surgeon, internist, pediatrician, or other specialist the management is best carried out in consultation with, or under the direction of, the syphilologist. The control of syphilis and its possible eradication appears to be a

community problem analogous to that of tuberculosis and mental diseases. Two thousand physicians are constantly in our state institutions and a multitude of patients in general hospitals and welfare homes through various ailments attributed to syphilis. This emphasizes the economic and social importance of syphilis. We estimate that approximately 60 per cent of syphilis cases today in upstate New York are treated at public expense and the taxpayers are little interested in academic discussions or in anything except the greatest value for the least expenditure of public funds.

Any effective drug suitable for the greatest number of physicians or which insures adequate treatment for the largest number of patients is of great value. Sulpharsphenamine meets these requirements. Many are at clinics today because of irregular, intermittent, and inadequate previous medical care and when it becomes necessary for public money to be expended for cases which could have been prevented by adequate early treatment, it seems a paramount right of the people and the duty of health officials to prevent this condition with its loss of usefulness to the individual and the large expenditure of public funds.

Arsphenamine is unsuited for general use, and until comparatively recently neoarsphenamine was rather an unreliable product varying greatly in composition and stability. Variations of 300 per cent in parasiticidal power have been shown and confirmed by other investigators,¹ while Roth showed that 25 to 30 per cent of commercial neoarsphenamine deteriorated in the ampule in the course of time. It was particularly unstable when exposed to air and agitated in forming a solution, which is common practice. The pain and local necrosis often seen resulting from faulty injections were a serious disadvantage.

When Voegtlin and Johnson produced sulpharsphenamine in the Hygienic Laboratory of the United States Public Health Service in 1922, it was thought that this

preparation might solve some of the difficulties, particularly in that it would provide a stable chemical compound, quite uniform, high in arsenic content and in therapeutic value, readily soluble, relatively nontoxic by laboratory experiments, and not destructive to the local tissues. The latter factor had a striking appeal. An arsphenamine that required no neutralizing and that could be given intramuscularly in 1 c.c. of distilled water was of inestimable value and immediately suggested the possibility of getting the vast majority of infected patients under early, lengthy, and effective treatment.

Manufacture was at once started in 1922 at the author's request in the Massachusetts State Laboratory and the resulting product easily passed the standard toxicity tests of the United States Public Health Service. This was placed in 20 clinics and in some state institutions for trial as to tolerance, therapeutic properties, dosage and concentration of solution for both local and intravenous use. About 15,000 gm. were distributed and after two years' trial it was pronounced a reliable and effective preparation.

This constituted what is believed to have been the first extensive trial of this drug.² The size of dose varied from 0.3 to 0.9 gm. and the drug was given intramuscularly and intravenously. Some clinicians got few, if any, reactions, and continued the use of 0.9 gm. while others got satisfactory results with smaller doses averaging 0.6 gm. intravenously and 0.3 to 0.45 gm. locally. It was found that for local treatment a dose limited to 0.45 gm. in 1 c.c. of distilled water was well tolerated in a large percentage of cases depending upon the temperament and type of patient and upon the personality of the clinician. Reactions were on the whole less than had been previously experienced with arsphenamine. With continued experience over several years it was found that 0.45 gm. was a dose both comparatively safe and effectively therapeutic when given either locally or intravenously.

As a result of this experience the Division of Social Hygiene of our State Health Department in 1925 began the free distribution of sulpharsphenamine to hospitals, state institutions, clinics, and practicing physicians for the treatment of patients unable to pay proper fees. Until this time comparatively little assistance had been given in the way of supplying drugs free

to physicians as the available arsphenamine went almost entirely to established clinics. To date, May 1, 1934, we have given out 159,034 gm. of sulpharsphenamine (since 1925), 100,949 gm. of arsphenamine (since 1919), and 41,778 gm. of neoarsphenamine (since 1932), and incidentally 340,110 c.c. of bismuth subsalicylate (since 1931), 36,050 c.c. of iodobismitol (since 1933), and 30,053 gm. of tryparsamide (since 1931).

Our experience with sulpharsphenamine has been satisfactory and quite at a variance with that of some other observers as to its value and dangers. A statistical study often shows a different picture from one's impressions; for this reason the author has assembled all the active case histories in three clinics where sulpharsphenamine has been used exclusively and where the records have been such that dependence could be placed upon them. This study deals with reactions as they are the main factor under discussion, for surely there can be little controversy regarding its therapeutic value. These case histories were tabulated and charted by the Division of Vital Statistics of the State Health Department.

Twenty-nine thousand five hundred ten injections of sulpharsphenamine were given to 920 patients in three clinics situated in Albany, Utica, and Rochester, referred to hereafter as Clinics A, B, and C, respectively. All but 693 treatments were given intravenously in doses varying from 0.3 to 0.6 gm. Some acute cases were treated twice a week and for a time all patients at one clinic received 0.6 gm. twice a week. Now 0.45 gm. is usually given and apparently there are equally as good therapeutic results and fewer of the severe reactions. The intramuscular injections were given mainly in special cases, e. g., congenital, central nervous system, and previous reactors. A few early cases were treated by this route throughout, and while the author's study is not complete, it is thought that this is the preferable route when patients will tolerate it. Intramuscularly, the drug seems to be quite as effective as arsphenamine; intravenously, in early cases and considerably more so in the late cases. Little reliance should be taken on the statement that has been made by some authors (a sort of apology) that the only reason for its use in congenital syphilis is its ease of administration.

Chart II tends to indicate a personal, or possibly prejudicial element in the records of the

clinicians, one specializing in the recording of one reaction, while others emphasized different reactions; e.g.: Clinician A noted taste, smell, nausea, and vomiting. Clinician C had an urinalysis before each treatment.

A remarkable similarity is noted under pruritus or slight dermatitis. The New York clinics had practically the same rate with sulpharsphenamine as the Co-operative Group had with their combined arsphenamines.

The Co-operative Group did not note loss of weight, lassitude, malaise, and so on—possibly indicative of intolerance.

CHART III

The co-operative clinic group's mild treatment reactions represent "the minimum of those occurring." The rates of the different clinics vary

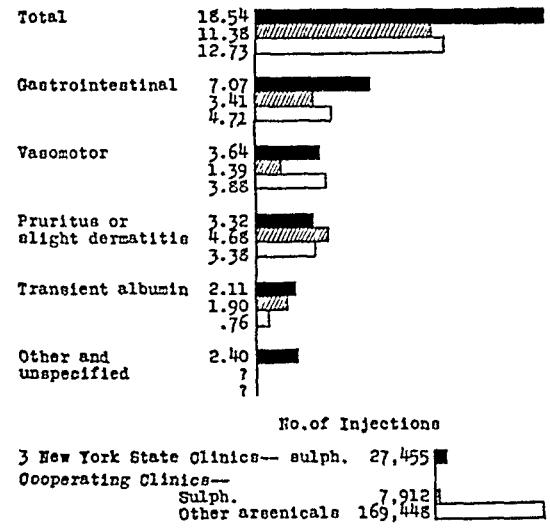


Chart III.—Mild treatment reactions to sulpharsphenamine and other arsenicals, per 1,000 injections, among patients treated or observed for six months or more.

from 2.4 per 1,000 injections to 18.54 per 1,000. While this chart may not represent the "maximum," it constitutes a fairly true picture. Refraining from eating before treatments has not been emphasized in sulpharsphenamine therapy. The gastro-intestinal and vasomotor figures are probably higher than good technic would warrant. Vasomotor reactions under usual conditions are rare.

It is rather surprising that again pruritus is about the same for our study as for all the arsenicals in the co-operative study. A physical examination including an urinalysis before each treatment in Clinic C no doubt accounts for the high rate of transient albumin. As previously mentioned, malaise, loss of weight, and so on, formed the "other and unspecified" reactions not recorded in the other study.

CHART IV

In every instance with the exception of purpura (which only occurred six times) the rates were less than those from the combined arsenicals in the Co-operative Group. There were no aplastic

anemia, cerebral hemorrhage, or acute yellow atrophy of the liver.

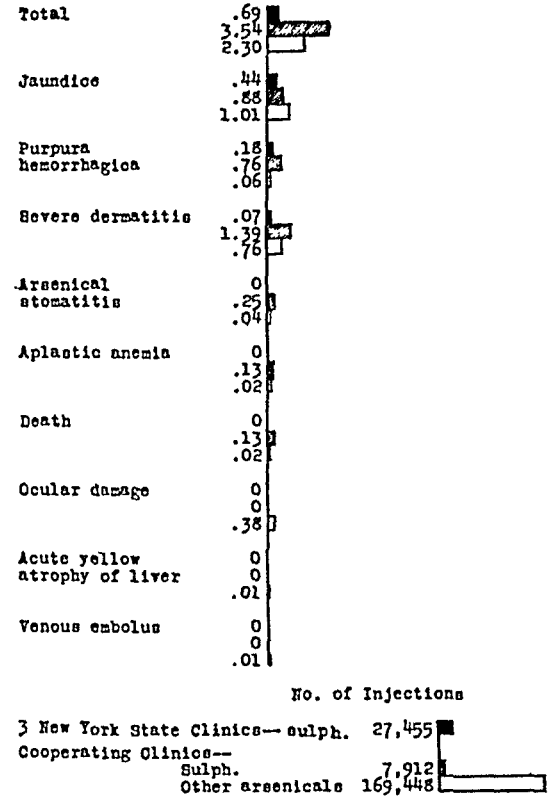


Chart IV.—Severe treatment reactions to sulpharsphenamine and other arsenicals, per 1,000 injections, among patients treated or observed for six months or more.

CHART V

Osborne's rate, 12.28 with but 896 injections, suggests a selected group which is obviously too small to form definite conclusions. The Co-operating Clinics' rate 3.54 with but 7,912 injections is open to the same criticism.

The Navy was a special group hardly comparable with regular civil clinic patients. The Co-operative Group gave 0.6 gm. as a maximum dose but no data as to intensity of the treatments.

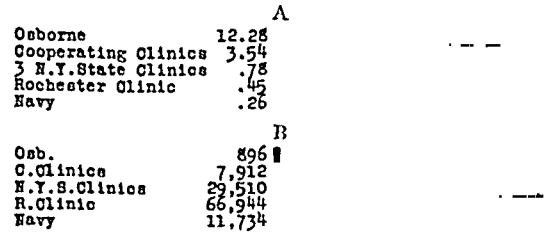


Chart V.—(A) Severe reactions per 1,000 injections of sulpharsphenamine. (B) Number of injections of sulpharsphenamine.

Most of the treatments were under 0.6 gm. The author does not believe that a true picture can be presented on the basis of the material studied thus far. Of the six cases of purpura in the New York study, four occurred in Clinic A that

had the smallest number of treatments. It seems reasonable to believe that some factor other than the drug per se is responsible for this type of reaction—an impurity, possibly an idiosyncrasy or some other contributory cause such as grippé or alcoholism or a combination of these factors.

A PENAL INSTITUTION STUDY

During 1929 to 1932, a penal institution in the state was supplied with 5,900 gm of sulpharsphenamine, 8,198 injections were administered, the average dose being 0.72 gm. The plan followed at first was to give ten weekly intravenous injections of 0.9 gm, two such courses being administered each year. No bismuth or mercury was used. Two thousand eighty-six of these treatments were given. The reactions recorded were:

Dermatitis mild 3
Transient albumin 2
Dermatitis severe 2

Jaundice 1 ending fatally from acute hepatitis.

Several of the patients exhibited a peripheral neuritis.

Late in 1930 the dose was reduced to 0.6 gm as a maximum size with a marked reduction in mild reactions. The final total of severe reactions for the 8,198 injections averaging 0.72 gm was: Dermatitis (mild and severe) 5, a rate of 0.01 per thousand, deaths, 3, a rate of 0.37 per thousand. The deaths were:

1 Male, age 33. Late syphilis, treatment 0.6 gm (2), 0.9 gm (6) other therapy, none, cause of death: acute hepatitis.

2 Male, age 40. Late syphilis, treatment 0.6 gm (8), 0.9 gm (12) bismuth salicylate (20), cause of death: acute nephritis, pernicious anemia.

3 Male, age 28. Late syphilis, treatment 0.6 gm (4), 0.9 gm (16), bismuth salicylate (5), cause of death: acute nephritis, uremia.

From the intensive sulpharsphenamine therapy with its large doses, it was rather surprising that the rate from dermatitis was so low—0.01 per thousand—is compared with 0.81 and 0.90 for neoarsphenamine and arsphenamine of the Co-operative Clinic Study. The single jaundice case gave a rate of 0.12 and there were no cases of blood dyscrasia.

Jonathan Hutchinson in the preface to his treatise on syphilis stated that "the results of clinical observation and those of experimental and microscopical research should always be considered together. It is not for good that either should be allowed to rank as a court of appeal from the decisions of the other. There are

special liabilities to error which are incident to each, and when their conclusions differ, the case should be tried over again."

An outstanding example of non-logical conclusions drawn from laboratory experiments is the work done by Fordyce and Myers on tryparsamide, reported in 1925.⁴ The conclusion was reached that tryparsamide was an inferior drug compared with salvarsan and silver salvarsan in the treatment of central nervous system syphilis. Since that time experience and mature judgment have proven the fallacy of the conclusions derived from this laboratory experimental work. The almost instant clinical improvement in so many of the cases, the feeling of well-being, the change in mental conditions and gain in weight is miraculous. Sulpharsphenamine was dealt with earlier in the year by the same workers with equally favorable results.⁵ (?)

Osborne *et al.*⁶ by a simple procedure attempted to prove the fate of the arsphenamines in the animal body. Substances reputed to have been crystals of arsenic trisulphate were seen and the tests were supposed to prove that the liver had not "metabolized" sulpharsphenamine as effectively as arsphenamine or neoarsphenamine. There is considerable doubt that arsenic can be split from its linkage with carbon by the process used to enable the sulphite to be formed. The experiments did not prove that the arsphenamines were metabolized in a given tissue.

Although from Ehrlich down to the present, biochemists and pharmacologists have tried to find out what it is that takes place in the body when an arsphenamine is injected, the metabolism of this process still remains more or less a mystery.

Modern research in the fundamental problems of chemotherapy requires an extensive organization of specialists, including a well equipped experimental laboratory and a picked personnel of chemists, pharmacologists, bacteriologists who must work in conjunction with the clinicians. Ehrlich's original laboratory was so organized and ample funds were available. His successor, Kolle, is manufacturing a preparation under the name of myosalvarsan which is chemically and pharmacologically similar to the American sulpharsphenamine.

Arsphenamine, neoarsphenamine, and sulpharsphenamine have all caused the same types of reactions terminating fatally in rare instances. Neoarsphenamine and sulpharsphenamine have been regarded as

more likely to cause the blood dyscrasias than the old product arsphenamine. These drugs have a very similar formula and it might be so but to what extent these two drugs per se have been responsible and how much has been due to the special sensitivity or idiosyncrasy of the individual patient, or due to other factors such as alcoholism, influenza, or other toxemias or inorganic adulterations, it is impossible at present to say. The arsenic content of different batches of both neoarsphenamine and sulpharsphenamine has a slight variance owing to the presence of chemical impurities. When severe blood dyscrasias occur with any of the arsphenamines, it is usually after the first, second, or third treatment; and the sudden occurrence and rarity of these conditions point toward other factors rather than to the drug itself.

Occasionally a certain lot of sulpharsphenamine will give a consecutive number of vasomotor reactions (which is a rare type of reaction in the use of this drug), and these reactions often occur at the beginning of the injections. The same batch has proven experimentally on animals to be perfectly safe. Fortunately this is a rare occurrence but when it happens in the field among practitioners, it is alarming and not only leads to complaints about the particular drug used but prejudice against the manufacturer as well. As a safeguard and further check the author's clinic has recently adopted a system of testing a sample lot before ordering a large supply of a particular output.

Arsphenamine is more colloidal than neoarsphenamine and sulpharsphenamine

still more so; they are, therefore, regarded as being slower to act on infectious lesions of syphilis.

Over a decade ago Stokes⁷ published the effect of an arsphenamine on a lesion of a patient with primary syphilis. Sulpharsphenamine 0.4 gm. was injected epifascially, causing no discomfort, and dark-field examinations were made each hour.

After 4 hours a change was noticed in motility and in the number of spirochetes and none could be found after 8 hours. After 11 days the chancre had entirely healed.

Clinically lesions respond at about the same rate with all the arsphenamines but a cure depends upon the follow-through effects of a drug over a comparatively long period to get the last spirochete. Sulpharsphenamine fulfills the public health requirements more than any other drug and deserves a more thorough scientific investigation and evaluation than has been given.

13 TEN BROECK STREET

REFERENCES

1. Voegtlin, Carl, Johnson, J. M., and Dyer, H.: Sulpharsphenamine, Its Manufacture and Its Chemical and Chemotherapeutic Properties, *Public Health Report*, No. 797.
2. Pfeiffer, Albert: Sulpharsphenamine in the Treatment of Syphilis, *Medical Times*, March, 1925.
3. Cole, et al.: Co-operative Clinical Studies in the Treatment of Syphilis—Arsenical Reactions. V. D. Information, Aug. 1933.
4. Fordyce and Myers: Quantitative Studies in Syphilis from a Clinical and Biologic Point of View, *Am. Jour. of Syph.*, 1925.
5. *Ibid.*
6. Osborne, Rickloff, Butler: An Evaluation of the Arsphenamines for General Use with Special Reference to Sulpharsphenamine, *NEW YORK STATE JOURNAL OF MEDICINE*, June 15, 1933.
7. Modern Syphilology, 1st edition, Saunders & Co.

SOLOMON'S R STILL GOING STRONG

When Solomon recorded that "A merry heart doeth good like medicine," he wrote a prescription still in wide use by the medical profession. Doctors and nurses attending the sick, according to a writer in *Life and Health*, realize how valuable it is as an aid to the recovery of patients to have their minds at ease concerning their

symptoms. A doctor's diagnosis is always presented in the most hopeful setting to the patient. Hope for the better is readily seized upon by everybody except the most despairing. That hope is a buoyant and sustaining element in the struggle. As long as it is retained, it greatly adds to the fighting spirit and maintains courage.

STORY OF THE WISE RATS

A story in the *Chicago Tribune* tells of a city in Southern California which tried to get rid of its rats by giving them corn treated with thallium sulphate. This chemical is a poison, as we all know, but is also used in small doses to remove hair from the body. The Mexican peon population, knowing nothing about the thallium

sulphate, stole quantities of the corn and made it up into the dishes that delight the Mexican palate. Within a few days every one who had eaten the poisoned corn was hairless and seven had died. Thirty-five, who were arrested, confessed stealing the corn. But the rats refused even to taste it.

RESULTS OBTAINED IN A RELATIVELY SMALL COMMUNITY USING THE SINGLE DOSE TOXOID METHOD FOR IMMUNIZATION AGAINST DIPHTHERIA

H. J. SHELLEY, M.D.

Middletown

ABSTRACT

This brief paper is presented not as an ultra-scientific dissertation but, rather, as an attempt to show why larger numbers of children can be immunized against diphtheria by the use of the one-dose toxoid than by the use of the two-dose toxoid or by toxin-antitoxin.

The fact that Middletown stands at the head of the list of all communities in New York State over 10,000 for the greatest number of children under five years immunized against diphtheria has caused many inquiries to be brought as to the reasons for this. The City's Health Department, in which the author is an officer, is proud of having achieved the record of 92 per cent.

A discussion of the details of the City's last campaign ought perhaps to be preceded by a mention of some of the difficulties encountered in this conquest of diphtheria. Notwithstanding the almost universal cry from physicians that health authorities are taking bread from their mouths by inoculating children in clinics, the fact is brought clearly into relief that the doctors themselves immunize an almost negligible number in our City even when the Public Health Nurse refers children directly to them rather than to the free Clinic.

After a number of years of experience it is the author's conclusion that if the community is to be protected against diphtheria, then the public health workers must do the job. The quiescent opposition of physicians no less than the indifference of parents makes this work discouraging and slow.

As to the matter of numbers of immunizations completed, it will not do to lose sight of the fact that in protecting John Smith of the millions, Josephine Gotrock of the four hundred is also being protected, for every child immunized increases the ratio of safe contacts associating with the children whose parents do not believe in "having those poisons" injected.

Up to 1933 the Department's methods were about the same as for nine years previous; i.e., toxin-antitoxin clinics were

held in the Board of Health rooms every Saturday at nine and there was used the three-dose toxin-antitoxin mixture distributed by the New York State Department of Health. No bad reactions of any kind followed the administration of approximately 15,000 doses.

While this program was fairly satisfactory from the standpoint of getting children inoculated, nevertheless the "Big Bad Wolf" made considerable trouble in that invariably there was a number of children who never returned for the second and third injections. Many parents believed one dose gave more or less protection; moreover, there were many families who moved from the City or from one district to another within the City that the Public Health Nurse was never quite able to catch up with them. These lapsed cases caused much confusion in the records as well as a waste of valuable time.

Early last year immunization work dragged and it was discovered that the Department's results were even less satisfactory than for the corresponding period of 1932. Inasmuch as it appeared that there was the necessity of doing something different, the staff began to conduct a more intensive campaign—more visits to families and to doctors, five-minute talks in the theaters, literature in every home whether or not there were children there, Metropolitan agents checking in their field, and so on. This campaign obtained only six new immunizations.

The staff changed, with many misgivings, to the two-dose toxoid; it was realized that any pronounced reactions would bring severe criticism from the medical profession and from the laity. However the results indicated success, whether simply because of the novelty or owing to the advantage of one less trip to the Clinic, it is difficult to say.

The next move was a radical one to undertake in a small city with a Board of Health budget pared to the bone and no slack to take up if expenses ran over. For, to change from a free immunizing product

to one which is relatively expensive, was an item from the financial standpoint. But the staff did change. Early in October was begun the use of the one-dose alum-precipitated toxoid Squibb.

The results were immediately gratifying. The author feels certain the present high record could not have been achieved had the use of the three-dose toxin-antitoxin, or even of the two-dose toxoid, continued.

From the angle of protecting larger numbers of children it is hardly necessary, of course, to point out the advantages of the one-dose agent. It cuts clinic work two-thirds, it obviates home nursing visits to bring children back for second and third doses, and, in the author's opinion, also reduces the number of home nursing visits required to bring children in to Clinic at first.

There will always remain in all strata of social positions an appreciable number of parents who would like to have their children immunized but who are lazy and will never bring them to Clinic or to family physician of their own accord. With this group it was decided to do as Dr. Bundesen of Chicago claimed to have done, in a paper read at the American Public Health Convention in Indianapolis. That is, he inoculated children in the homes. Personally, the author had always considered this poor practice, but after hearing Dr. Bundesen's version of it, he had prepared a survey of the Middletown children under five who were still unimmunized. The number was large enough to be interesting, so the latter part of the year he went into the homes with the one-dose toxoid and treated a sufficient number to put Middletown on the map for 1933. The total number of immunizations for the year was 402. This marked an increase in percentage of immunized children under five years from 87 per cent in 1932 to 92 per cent in 1933.

As to the degree of protection afforded by the one-dose toxoid, authorities seem to

be at some variance, as they are on most medical subjects. Possibly some of these differences lie in the fact that the various workers have used different products and of varying antigenic potency.

Concerning the immunizing value of diphtheria toxoid alum precipitated, workers from Alabama—Graham, Murphree and Gill—make these comments:

The results of immunization of children indicate clearly that a single injection of the alum precipitated toxoid results in immunity in a high percentage of cases. A single injection appears to be as effective as two or three injections of the best unprecipitated toxoid. The group of children who are known to have been strongly Schick positive prior to the injection of toxoid yielded 92.4 per cent completely Schick negative results from two to six months later.

It seems plausible to explain the effectiveness, as an immunizing agent, of the precipitated toxoid on the basis of its relative insolubility. It is absorbed slowly, less antigen is lost by rapid excretion, and there is a consequent prolonged antigenic stimulation.

Precipitated toxoid has several advantages over the ordinary toxoid. Foremost, of course, is its greatly superior antigenic action. For practical field work in the prevention of diphtheria, the value of a single injection needs no comment.

Reactions, on the whole, either local or general, were no greater or more frequent than would be expected from ordinary toxoid in similar groups.

And so, down in Middletown the Health Department is now recommending the one-dose toxoid for all children from six months to five years of age. In the older age groups we recommend the old toxin-antitoxin. Also, we pay no attention to the ignorant wail that the inoculations should not be given in summer as it is too hot, nor to the equally unfounded objection that it is too cold in winter. Our diphtheria prevention work goes on month in and month out and we are hoping that by the use of the one-dose toxoid to raise our percentage of immunized pre-school children another few points this year.

35 SOUTH STREET

MICHIGAN HOLDING THE FORT

In spite of the famous "Detroit Plan," the Michigan State Medical Society, at its last meeting, voted not to experiment with the mutual health service plan presented by the committee on economics. The president of the Society says in a signed statement in its *Journal* that the decision reflects the general sentiment of the profession throughout the state and "demonstrated in no uncertain manner that we, as practicing physicians, desire to continue in the traditional

way to maintain the physician-patient relationship, our independence, the control of our practice, and the opportunity to succeed individually according to character, energy, and merit, receiving such remuneration—often meager and inadequate—as our patients can give us. We prefer this to regimentation and its uncertainties, a greatly increased amount of medical work, a more regular income and possibly—though here opinions vary—a much more remunerative one."

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The first important pitfall in the treatment of gastric ulcer then is to differentiate gastric and duodenal peptic ulcer; he then puts the patient on a dietary régime. Because the doctor considers it practically impossible to be relieved entirely or fairly soon, the patient to the added expense of a genographic examination. The position of the ulcer, the patient himself take the matter in his hands by failing to follow the doctor's advice. He feels so much better in the stomach, that the unfortunate sequence of symptoms is not recognized.

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them can be avoided by a plan of procedure which differentiates clinically the benign from the malignant ulcer by its reaction to treatment within a short period of time. The details of the plan which we have adopted to accomplish this purpose will be given shortly.

One other factor besides the danger of malignancy makes the medical treatment of certain chronic gastric ulcers unsatisfactory, *viz.*, the adherence of the ulcer base to a neighboring solid organ. This is apt to occur in large lesions from the location of the ulcer along the lesser curvature. If the ulcer becomes firmly adherent to a

densely adherent to the pancreas which probably accounted for recurrence under a satisfactory medical régime.

In order to avoid these pitfalls in the treatment of chronic ulcers of the stomach, we have evolved the following method of handling such patients in our clinic, based partly upon procedures reported from other clinics. After the localization of the ulcer in the stomach by x-ray, the patient is given strict dietary treatment in bed. We usually use the Sippy régime with alkaline powders. The symptoms must recede within a few days and within two weeks they must practically disappear, including occult blood



Fig. 1.

solid viscus, usually the pancreas or liver, then with healing its base cannot contract down properly. As a consequence, the newly formed mucous membrane has to spread over a large connective tissue base where its blood supply is poor. Such an ulcer, even after it is healed, easily breaks down again. This adherence of the ulcer base is an important cause of refractoriness to medical treatment and of recurrence. Under these conditions, continuation of medical treatment is futile and operation gives much more satisfactory results than attempting to keep the patient comfortable by repeated strict dietary régimes.

J. R., aged 50, an intelligent orderly in the hospital, has had ulcer pain related to meals and relieved by soda for four years. Physical examination negative. Roentgenographic examination showed a penetrating ulcer on the lesser curvature of the stomach. Strict medical régime relieved all symptoms, but they recurred four months later with a persistent niche roentgenographically. At operation the ulcer base was



Fig. 2

from the stools if present. At the end of three weeks, a second roentgenographic examination is made and at this time we decide on further therapy. If the symptoms and occult blood have disappeared and the ulcer niche shows a very considerable decrease in size (usually at least 50 per cent), then it is proper and usually advisable to continue medical treatment, usually changing to a smooth diet and allowing the patient to go home.

W. I., aged 56, has suffered repeated exacerbations of ulcer pain for twelve years. A recent

attack was associated with major hemorrhage for the first time. Physical examination was negative. Roentgenographic examination showed a penetrating ulcer on the lesser curvature. (Fig 4.) The stool was strongly positive for occult blood. On strict medical regime, the patient became symptom-free. The occult blood disappeared from the stools, three weeks after the first roentgenographic examination this was repeated showing great decrease in the size of the niche. (Fig 5.) Consequently the patient was put upon ambulatory medical treatment which was checked in two months by another gastro-intestinal x-ray examination, showing complete disappearance of the niche

But if ambulatory medical treatment is adopted, the physician must continue to follow the patient roentgenographically un-

A. D., aged 46, has had typical attacks of ulcer pain for eight years. Two episodes of hemorrhage have occurred. He has lost 40 lb. in weight during the last year. Roentgenological examination revealed an enormous penetrating ulcer high on the lesser curvature. From the size of the lesion and the extensive weight loss, a malignant ulcer was strongly suspected. He responded rapidly to medical treatment, reducing the huge niche to about a quarter of its initial size in three weeks. Succeeding x-rays showed further healing until a small V-shaped defect remained. This did not disappear, but on subsequent examination began to enlarge again with the return of symptoms. He was then operated upon before the ulcer again became large. The cause of the recurrence was found to be adherence of the ulcer base to the liver.



Fig 3

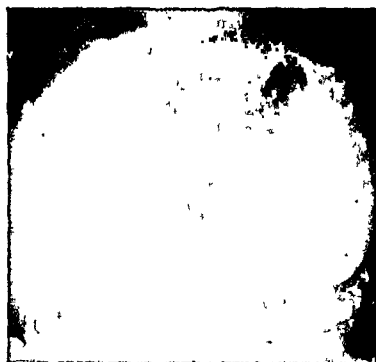


Fig 4

til the lesion has healed completely. On the other hand, if the patient cannot be made symptom-free, if the ulcer at the end of three weeks does not show considerable diminution in size, or if symptoms recur, then unless the patient is definitely a poor risk, surgical intervention should be instituted. Even after spectacular improvement in a very large ulcer, if the niche starts to enlarge again under treatment, the patient should be operated upon rather than to wait until it has attained a large size again.

The fact that the ulcer crater begins to increase in size under treatment is due to some condition which makes medical treatment unsatisfactory, usually either malignancy or adherence of the base. When the ulcer is malignant, there is often considerable symptomatic improvement and there may be a definite decrease in the size of the niche. Usually, however, it is easy to determine at the end of three weeks in these cases that the diminution in the size of the niche is not satisfactory. Such cases should be operated on then with the loss of only a month from the time when they are first seen and while they are frequently showing considerable symptomatic improvement.

C. W. A., aged 62, has had ulcer pain for seven months. Physical examination negative. At his first visit to the clinic he was put on an ulcer

dietary régime and arrangements were made for roentgenographic examination. The latter showed a penetrating ulcer on the lesser curvature of the stomach. When he returned to the clinic after the ex-ray examination (9 days after his first visit) his symptoms were entirely relieved so that he objected strenuously to coming into the hospital. Three weeks after the first roentgenographic examination this was repeated. Although one view seemed to show considerable decrease in size, the ulcer niche was really little smaller than originally. Surgery was advised and accepted. The ulcer at operation had no characteristics to distinguish it from a benign lesion, but microscopically it was definitely malignant. His prognosis is excellent for cure.

By this plan we do not submit to operation the cases that respond satisfactorily to medical treatment. If symptoms recur while the patient is still under treatment, then again unless there is some strong contra-indication to operation, the latter should be carried out without delay as the lesion may be malignant and if it is not, some mechanical condition tending to recurrence is usually present.

When operation is undertaken and a gastric ulcer is found, even though there is nothing in its appearance to suggest malignancy, we perform a subtotal gastrectomy just as if the ulcer were known to be malignant. This is done because nothing in the gross appearance of the lesion can with assurance rule out a carcinomatous involvement in what appears to be a benign ulcer. Gastro-enterostomy and local excision of the ulcer are unjustifiable in the patient with a gastric ulcer who is a good surgical risk. If the lesion is malignant, it is almost certain to recur after local removal, while subtotal gastrectomy with meticulous removal of the lymph glands of drainage will cure many of these ulcers that prove microscopically to be malignant. By following this plan, operation is avoided in 50 per cent or more of the patients with chronic gastric ulcer. The results in the benign ulcers that have required operation have been most satisfactory and several carcinomatous ulcers have been resected in a stage in which the prognosis for cure is excellent. We have two patients who had carcinomatous gastric ulcers alive and well

now seven and one-half and eight years, respectively, after gastrectomy and several others for shorter intervals.

SUMMARY

1. The danger of malignancy in gastric ulcer absolutely requires the differentiation of gastric from duodenal ulcer.
2. Many gastric ulcers, some very large ones, will heal under dietary treatment.
3. The progress of healing must be followed by roentgenographic examinations. Symptomatic relief is entirely inadequate as a guide to treatment.
4. Refractoriness to medical treatment is

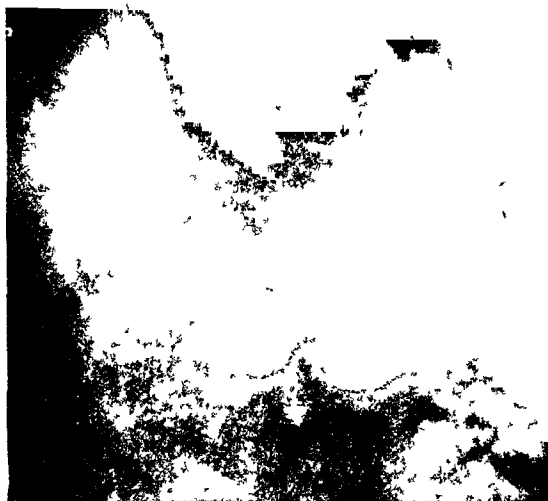


Fig. 5.

usually due to malignancy or adherence of the ulcer base.

5. A procedure is outlined for the handling of gastric ulcers which attempts to avoid these pitfalls. By it operation is avoided in many cases. Results have been excellent in the benign ulcers that are refractory to medical treatment. And a number of carcinomatous ulcers have been resected with the delay of only a month while the prognosis for cure is good.

ORGANIZATION OF PHYSICIANS, DENTISTS, NURSES, AND PHARMACISTS

A permanent organization of the physicians, dentists, nurses and pharmacists of New Jersey was perfected on September 12, 1934, in the executive offices of The Medical Society of the State of New Jersey.

The need for such an organization was felt during the legislative session of last Winter and Spring when measures of mutual interest to the members of the four groups were under consideration.

OBSTETRICAL PRACTICE IN NORTHEASTERN NEW YORK STATE

EDWIN M. JAMESON, M.D.

Saranac Lake

It is well for business men in any line of endeavor to pause occasionally and take inventory. This survey was undertaken for the purpose of evaluating the type of obstetrical work being done in that portion of New York State which comprises the counties included in the Fourth District Branch of the New York State Medical Society* and of comparing the results with similar surveys made elsewhere in the country. It has not been an easy task and would have been impossible but for the co-operation of the superintendents of the various hospitals who so kindly supplied the necessary data.

This survey is based upon records from the maternity services of twelve hospitals in the district and from data furnished by the district health officers. As nearly as could be determined, about one-third of all births in northeastern New York State take place in hospitals, although the figure varies considerably in the different localities. Four of the hospitals were located in cities of more than 10,000 population and may be considered urban, the remaining eight were located in towns of less than 10,000 population and may be considered rural. There was no appreciable difference in the operative incidence, still-birth or infant death rates in these two groups. The maternal mortality was somewhat higher in the urban hospitals.

The great majority of obstetrical practitioners represented in this group are general practitioners so that the data may be regarded as a cross section of obstetrical practice in the average general hospital in the district. The survey covers a period of five years from 1929 to 1934, and comprises records on 5,914 cases past the sixth month of gestation. In some data the reports are incomplete so that all the figures are not based upon the entire series.

Of the 5,914 cases, 1,636, or 27.6 per cent, were delivered by some operative procedure. This means that nearly one in

every three parturient patients was considered to be in need of some artificial measure to effect delivery. As was to be expected, in a large proportion of these cases (22.8 per cent of the total) forceps were used. About one in every four women had forceps applied.¹ This figure may be compared with that of 17.4 per cent obtained by Plass in a survey of 207 representative general hospitals in the United States with 121,000 deliveries. Plass concludes his paper reporting this survey with the statement: "When the use of forceps is limited to actual need, instrumental delivery is uncommon and probably represents not more than 5 per cent in any given consecutive series. Any great increase over this figure savors of meddling midwifery." From an analysis of numerous large series of forceps deliveries the same author has found that approximately 6 per cent of all babies delivered by forceps will be either still-born or will suffer neonatal death. With low forceps the rate is 3 per cent, with midforceps it is five times higher (about 15 per cent), and with high forceps it is at least 30 per cent.

Other hospital series with which the incidence of forceps deliveries may be compared include the Bronx Hospital with a figure of 6.04 per cent, Novey's series from the University of Maryland with 3.5 per cent, and the Morrisania Hospital in New York City with an incidence of 10 per cent.

Of 1,894 deliveries reported with details on morbidity, 172, or 9.08 per cent, showed a puerperal infection as determined by the American College of Surgeons' standard of 100.4° F on two successive days. This standard is usually considered too lax and most obstetrical specialists have adopted a stricter criterion of morbidity. The only report encountered in the literature which seems to have used this standard was from the Morrisania Hospital (a municipal hospital in which conservatism is emphasized), where a figure of 7.7 per cent was quoted.

The somewhat more rigid standard in use in the Royal Victoria Hospital in Montreal regards a single rise of temperature to 100.5° F at any time during the

*The Fourth District Branch of the New York State Medical Society comprises the following counties: St. Lawrence, Franklin, Essex, Clinton, Fulton, Montgomery, Warren, Schenectady, Washington, Hamilton and Saratoga.

hospital residence (exclusive of the first 24 hours after delivery) as evidence of morbidity. This hospital's figure of about 20 per cent may be compared with that of 14.7 per cent in this series. While this is apparently a favorable comparison, the Royal Victoria Hospital's figure includes abortions and cesarian sections; the series under discussion does not include gestations of less than six months' duration and in many hospitals in the district the cesarian section cases are carried on the surgical services.

DeLee regards a single rise of temperature to 100° F. as indicative of maternal morbidity and finds that in the Chicago Lying-In Hospital (in which both obstetrical and gynecological cases are treated) about 42.5 per cent of the maternity cases fall within the morbid group. Of 1,421 cases in the present series analyzed from this standpoint, 359, or 25 per cent, were morbid. Again the comparison appears to be favorable but the factors mentioned in the preceding paragraph must be taken into consideration and one would expect that the patients covered in the present group, coming as they do from rural or suburban surroundings, would be likely to be of healthier stock than DeLee encounters in Chicago.

Toxemias of pregnancy led the list of causes of maternal morbidity, with infections present on admission (mostly upper respiratory) second, and acute nephritis third. In common with the generally accepted belief, many of the temperature rises occurring on the third or fourth days were regarded as due to the milk. This factor is no longer regarded as a cause of fever by many obstetricians who point out that since it is not exhibited by every woman, it is therefore not physiological. It is also to be recalled that sloughs resulting from tears and infections of birth canal lacerations would be most likely to become manifest about the third day postpartum and would coincide with the so-called "milk fever."

One frequently hears the statement that infections are less likely to occur in home deliveries than in the hospital. This is probably only a partial truth, although there is no doubt that fewer operative deliveries are conducted in the home than in the hospital. At the same time, however, temperatures are not taken as regularly in cases delivered at home and it is highly

probable that many elevations of temperature are unsuspected and remain undiscovered. Goodall found that 80 per cent of cases of puerperal infection were symptom-free and it would seem unlikely that home deliveries should be entirely free from a share of these cases.

Of the 5,914 cases covered in the survey, cesarian sections were done in 135 instances, an incidence of 2.2 per cent. This is somewhat more than double the figure usually given for the United States as a whole and that found by Plass in his Iowa survey. The figure may also be compared with an incidence of 0.6 per cent for the Morrisania Hospital and with figures varying from 0.5 per cent to 3 per cent for various hospitals in Detroit. It should also be compared with Nicholson's report of 90,926 women delivered by midwives in Pennsylvania in which only 4 cases were submitted to cesarian section and in which there were only 77 maternal deaths and an infant mortality in the first four days of life of only 0.02 per cent.

The indications for the use of cesarian section were stated in only 32 instances in the cases collected from the hospitals in the Fourth District (25 of which were from one hospital whose incidence was 4.3 per cent) so that no inferences are possible. It is improbable, however, that an incidence over twice that for the United States as a whole, over three times that of the Morrisania Hospital, and so much greater than that given in other series is based upon recognized justifiable indications.

There were 54 maternal deaths in this series of 5,914 cases—a rate of 9.1 per 1,000. This figure may be compared with that of the Registration Area of the United States in 1929, which was 7 per 1,000; with 2.4 per 1,000 recorded by the Maternity Center Association of New York City in which the cases received adequate prenatal care; with 5.3 per 1,000 for New York City at large; and with 1.8 per 1,000 for the Bronx Hospital. No data are available by which the maternal death rates for hospital and home deliveries may be compared, but it was found that the rate for the four urban hospitals in the district was 9.5 as compared with 8.9 for the smaller hospitals.

Of these 54 deaths, 15, or 28 per cent, were attributed to toxemias of pregnancy, 3 to sepsis, 2 each to placenta praevia, rup-

tured uteri cesarian section, intercurrent acute infections (scarlet fever and pneumonia), 1 each to heart disease, embolism, urinary suppression before admission (not delivered), influenza with infection from a macerated fetus (sic), auto accident, shock, postpartum hemorrhage, tuberculous meningitis, cerebral hemorrhage, and, curiously enough 1 to a contracted pelvis. In 18 instances the cause of death was not stated. Of the 36 in which the cause of death was given it is probable that at least half could have been prevented by proper prenatal care before confinement or proper management of the confinement itself. If these 54 deaths were divided equally among the physicians practicing in the district and distributed over a period of five years so that each lost a mother every two or three years, the weight of responsibility would not be appalling. Yet the total is not in keeping with the ideals of a profession whose duty it is to safeguard human life.

There were 297 still births in the group—an incidence of 50 per 1,000. About 43 per cent of the still-births in the district occurred in the hospitals, although only a third of all the maternity cases were handled in institutions. This figure may be compared with that of 22 per 1,000 for the Bronx Hospital. Figures obtained from the New York State Board of Health show that the still birth rate for Franklin and St. Lawrence counties is 42 per 1,000. This rate for still-births is almost twice that obtained by Plass in Iowa (2.94 per cent), twice that of the Maternity Center Association (2.7 per cent) and almost as high as that of New York City as a whole (4.7 per cent).

If the figures obtained from the seven Boards of Health that reported be combined, the still birth rate in 16,481 births in the district is 41.5 per 1,000. In communities with a population over 10,000, the hospital rate is 53 per 1,000 and in the smaller communities the hospital rate of 48 per 1,000 approaches, but does not attain the figure for the district as a whole. This is an interesting point and is not entirely explained by the high incidence of operative deliveries because the operative incidence for the hospitals in the larger centers is almost exactly that of the smaller communities.

In the cases obtained from the hospitals the cause of the still birth was unknown or not recorded in 204 instances. Of the re-

maining 93 cases, 39 per cent were premature, 20 per cent were attributed to toxemias of pregnancy, and 13 per cent were due to developmental defects in the fetus. Other causes given included cord around the neck, 5, placenta praevia, 5, breech deliveries, 6, birth injuries due to attempts to deliver through contracted pelves, 2, prolapsed cord, 3, maternal infection (no details), 3, and 1 each to prolapsed uterus, diabetic mother, and cesarian section. Not a single instance was attributed to syphilis which is recognized as one of the most common causes of premature deliveries and still-births. Yet in one community where the Board of Health made an attempt to check up on mothers who had given birth to still-born infants, three of the first four examined were found to have a positive Wassermann.

Northern New York has lately been severely censured by the State Department of Health for its high still-birth rate and the situation is indeed intolerable. Analyzing the still-births in the United States Registration Area for 1920 and 1929, Litzenberg found that 64.3 and 55 per cent, respectively, were due to conditions amenable to preventive measures. There is evidence that about the same proportion would be found to hold true in this series. As far as birth injuries as a cause of still-births are concerned, Plass found that still-births occurred four times as frequently in operative as in spontaneous deliveries, and it is recognized that high forceps and version and extraction carry an almost prohibitive risk to the child even in the hands of experts. Among spontaneous deliveries in Iowa, Plass found the still birth rate to be 2 per cent, as compared with 8 per cent for operative deliveries. As he is careful to point out, this association of a high still birth rate with operative deliveries is surely significant and may be partly explained by the obvious fact that complications of pregnancy demanding delivery often of themselves prejudice the child's chances of life. On the other hand, he believes that the relatively high operative incidence for his group (which is less than that found in the series under survey) would indicate that many "convenience" operations were performed and it is generally agreed that they endanger the child's life to a certain extent. In urban hospitals where Plass found an operative incidence of 23.1 per cent, the total still birth rate was 3.9 per cent as

compared with a rural hospital operative incidence of 14 with 2.7 per cent still-births. As has been shown above, there is but little difference between the rates for urban and rural hospitals in the Fourth District (5.3 and 4.8 per cent, respectively), but both are higher than the rate for the district as a whole (4.1 per cent).

The infant mortality rates for Northern New York State have also been under criticism by the State Department of Health and action has already been taken to find the causes and supply a remedy. According to *Health News*, about 80 per cent of the neonatal deaths result from causes pertaining to the function of maternity, congenital malformations, birth injuries, and prematurity. Prematurity alone accounts for two-fifths of them according to this source.

As this survey was primarily concerned with those deaths which occurred from causes pertaining to the maternal function, only those deaths which occurred in hospitals were studied. There were 197 such deaths in the group—an incidence of 33.3 per 1,000. It was impossible to compare the neonatal deaths with those of the district as a whole because neonatal deaths in the vital statistics of the district are taken as those occurring up to the age of one month while in a hospital series the age seldom exceeds two weeks. However this may be, the death rate of 33.3 in this series may be compared with 33 for the Herman Kiefer Hospital of Detroit, which is a city hospital; with 13 for the Bronx Hospital; and with a total of only 29 for the entire first month of life in cases cared for prenatally by the Maternity Center Association in New York as contrasted with a figure of 43 for a control group in New York City. It may be noted in passing that the figure given by the District Health Officers for the Fourth District is 44.2 per 1,000, which is higher than that of New York City in spite of the fact that the counties covered in this survey are essentially rural and would be expected to have a much lower rate.

Of the 197 neonatal deaths that occurred in the 12 hospitals during the five years covered by the survey, 81 were reported in sufficient detail to analyze. Forty-four (54.3 per cent) were due to prematurity. No doubt this figure has obtained for years, yet there are only two or three hospitals in the district which have an infant incubator

and facilities for caring for premature babies. Thirteen, or 16 per cent, were ascribed to birth injuries. It is probable that many of these might have been prevented. Other causes of death included congenital defects, 9; icterus neonatorum, 1; "weak babies," 2; cesarian section, 1; twin birth, 3; atelectasis, 1; unknown, 8.

If the still-births be added to these neonatal deaths, one gets the appalling total of 494 dead babies in 5,914 deliveries. In other words, there will be one infant death in every 12 babies born in northeastern New York State.

COMMENT

It would seem superfluous to attempt to add anything by way of comment to the evidence brought forth by this survey. Present conditions of obstetrical practice in northern New York are disgraceful and intolerable. Nor are signs of improvement evident. While it is true that some of the factors responsible for this poor showing are outside the physician's province, there is still much that he can do. Dr. Parran has pointed out that the level of medical practice in a community can be no higher than the intelligence of the people who make up that community and some of the conditions revealed by this survey can be corrected only by regarding them as public health problems to be solved through the medium of a state-wide educational program. Women must be educated to the value of prenatal care and physicians can refuse to accept cases who have not applied for such care before labor begins. On the other hand, there is no doubt that many physicians have neglected their responsibilities to the patient who has consulted them during the prenatal period and the management of the confinement itself has not always been rational. Prenatal clinics as conducted by the State Board of Health or other outside agencies are not satisfactory—at least in Saranac Lake there was no appreciable improvement in the figures during the two or three years such a clinic was maintained. Prenatal care to be efficacious must be in the hands of the physician who is going to handle the confinement as it is only by observation over a long period of time that he can "size up" his patient and plan her delivery along safe and sane lines. As for the confinement itself, more obstetrics and less meddlesome midwifery is needed. The difference

between the two has been admirably outlined by DeLee in a paper that should be studied by every physician who undertakes to practice obstetrics. It is perhaps a sign of the times that the program of so many county and district medical society meetings includes a paper on "The Use of Forceps." The need is for greater emphasis on the management of normal labors and it is gratifying to see occasionally a program such as that of a recent clinical convention in which the head of the department of obstetrics and gynecology of the

medical school at which the convention was held chose for his subject "Normal Delivery."

REFERENCES

- DeLee, J. B. and Siedentopf, H. The Maternity Ward of the General Hospital. *JAMA* 100:6, 1933.
Aranow, H. An account of a Year's Service in Obstetrics at the Morrisania Hospital, a Public Institution. *Am J Obst and Gyn* 25:420, 1933.
Class, F. D., and Alvis, H. J. Statistical Study of 123,539 Births in Iowa, etc. *Amer J Obst and Gyn* 28:293, 1934.
Frank, C. W. and Kushner, J. I. Obstetric Mortality—An Analysis of 2,268 Maternity Cases at the Bronx Hospital. *Am J Obst and Gyn* 21:708, 1933.
DeLee, J. B. Obstetrics vs Midwifery. *JAMA* 103:307, 1934.
Health News Aug 27, 1934.

CASE REPORT

CONGENITAL FUSION OF ASTRAGALUS AND SCAPHOID BILATERAL, INHERITED

ABRAHAM S. ROTHBERG, M.D. JOEL W. FLIDMAN, M.D.
and OTTO F. SCHUIFLER

New York City

Congenital abnormalities are often seen, incidentally, when examining for other conditions. For example, bi-partate sesamoids, fusion of metatarsals and cuneiform, cuneiform and cuboid, and the usual commoner variations from the normal are found when roentgenograms are studied for suspected fractures, and so on.

There are some cases mentioned¹ in the literature of fusion of the astragalus and scaphoid, but these are due to infections, arthritis or surgery, and are not congenital.

Although various fusions are found, the congenital astragalo-scaphoid variety is extremely rare. Pfitzner² and Dwight³ who wrote extensively on variations of the bones of the feet never saw a case of congenital fusion of these bones.

Anderson⁴ reported the autopsy of a man of thirty four years of age, without any available history, in whom were found bilateral astragalo scaphoid fusions probably congenital.

Holland⁵ reported a case of a woman twenty one years old, with bilateral and symmetrical fusions of the astragalo-scaphoid and calcaneo cuboid joints, also the second and third metatarsals were fused to their respective cuneiform bones. The carpal bones also had some bilateral anomalies. These were roentgenogram findings

These were presumably of congenital origin.

Illievitz⁶ reported a case of a boy of seventeen, who had four toes, four metatarsals, and a congenital fusion of the astragalus and scaphoid, all on the right foot. The left foot presented no clinical nor x-ray variations.

Bullitt⁷ reported a case that he discovered in routine x-ray examination for a sprain in a man of thirty-five. There were definite bilateral congenital fusions of the astragalo scaphoid joints. Incidentally, there were large accessory scaphoids. He quoted Dr. Meyer as to criteria in determining the congenital from the acquired fusions.

The trabeculae of the spongiosa in the talus [in the congenital fusions] are continuous to the anterior surface. In cases of ankylosis, there would be a line of demarcation unless it occurred early in life and were of long standing.

Lapidus⁸ describes the case of a girl of nine with congenital fusion of the astragalo scaphoid joints of both feet. X-ray examinations of both parents and the brother of the patient did not reveal any abnormalities.

One of the authors⁹ described a case of a man of thirty five in whom was found excessive mobility of the right scaphoid-

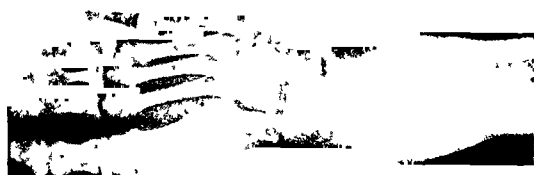


Fig. 1.



Fig. 2.

cuneiform joint, clinically. X-ray of the right foot revealed a congenital fusion of the scaphoid and astragalus of the right foot, and no abnormality of the left.

Our case is that of a girl, eight years old, who presented herself because of pains in the calves of the legs and tired feeling in the lower extremities. About two years previous to her admission to the clinic, her mother noticed a knobby prominence at the inner side of the feet. There was no particular pain at this site. Patient had no accidents, no arthritis, nor any disease involving the bones of the feet.

Examination revealed a well-developed child, with mild weak feet, with a slight protrusion at the heads of the scaphoids. The contour and shape of the feet were otherwise normal. There was no limitation of motion of the feet; no spasm nor rigidity. Pulses were good. Local and general neurological examinations were negative. Posture was good. Whitman cupped heel-plates were prescribed and worn with relief of symptoms, but the prominence did not recede.

X-rays were advised expecting to find accessory scaphoids (tibial externum). These revealed marked enlargement of the neck of the astragalus and the scaphoid fused to it. No other abnormalities were



Fig. 3.

observed. (See Fig. 1 and Fig. 2). X-rays of the hands did not show any deviation from the normal. (See Fig. 3.)

X-rays were then advised for all the



Fig 4



Fig 5

members of the family. The brother, age eleven, has never had any foot trouble, but has similar prominences over the heads of the scaphoids. The X-ray plate is similar to that of his sister (See Fig 4)

The mother, age thirty-one, does not remember any prominences at the inner side of her feet at any time. She has never had any symptoms referable to the feet. She does not recall having seen any bony prominences at the feet of any of her brothers or sisters, father or mother. The shape and contour of the feet are normal. X-rays of her feet show abnormalities similar to those found in her son and daughter (See Fig 5)

SUMMARY

1 Of all the congenital fusions of the feet, that of the astragalo scaphoid is the rarest

2 Three cases of bilateral congenital fusion per se were culled from the literature. One case of unilateral fusion per se was also described

3 A case of bilateral congenital fusion of the astragalo-scapoid joint is reported. The same X-ray findings were observed in the girl, her brother, and then mother

4 This is the first and only case of bilateral congenital fusion of the astragalo-

scaphoid joint on record with definite hereditary factors

ACKNOWLEDGMENT

Patient and material are from the Foot Clinics of New York

We wish to express our thanks to M F Petti, Ringel, and Silver, of the X-ray Department for their help and co operation

REFERENCES

- 1 Morestin H. Ankylose Astragalo Scaphoïdienne. *Bull Soc Anat de Paris* 71: 649 1896
- 2 Haglund P. Ein Fall von Vollständiger Coalitio Talo Navicularis. *Ztschr f Orthop Chir* 51: 93 1929
- 3 Pfizner, W. Die Variationen im Aufbau des Fuss skelets. *Morphol Arb* 6: 493 1896
- 4 Dwight T. *A Clinical Atlas Variations of the Bones of the Hands and Feet*. Philadelphia: J B Lippincott Co 1907
- 5 Anderson R J. The Presence of an Astragalo Scaphoid Bone in Man. *J Anat & Physiol* 14: 452 1879
- 6 Holland C T. Two Cases of Rare Deformity of Feet and Hands. *Arch Radiol & Electroth* 22: 234 1918
- 7 Ilievitz A B. Congenital Malformations of the Feet. Report of a Case of Congenital Fusion of the Scaphoid with the Astragalus and Complete Absence of One Toe. *Am J Surg* 4: 550 1928
- 8 Bullitt J B. Variations of the Bones of the Foot. Fusion of the Talus and Navicular. Bilateral and Congenital. *Am J Roentgenol* 20: 548 1928
- 9 Landis P W. Congenital Fusion of the Bones of the Foot with a Report of a Case of Congenital Astragalo Scaphoid Fusion. *Jour of Bone and Joint Surgery* 14: 888 1932
- 10 Schuster O F. *Foot Orthopedics*. N Y: First Institute of Podiatry, p 17 1927

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EDITORIALS

"Elementary Rights of Children" and the Proposed Child-Labor Amendment

The fight is now on, it appears, as legislatures meet, over ratification of the proposed child-labor amendment to the U. S. Constitution. It is an opportune time, then, for this JOURNAL to repeat flatly and emphatically, that it is opposed to ratification, and to state why. The "elementary rights of children" are involved, says Mr. Courtenay Dinwiddie, secretary of the National Child Labor Committee, in a letter to a member of our Management Committee, seeking to persuade us to alter our stand. And Mr. William Green, president of the American Federation of Labor, is out with an appeal to labor organizations to work for ratification.

It is certainly not necessary to say that the physicians who brought these children into the world, and have watched unremittingly over their health and welfare, desire now to save them from the evils of child-labor. No one has a better right to the title of their friend and protector. But the physician demands that measures for their protection be founded in wisdom, not in emotionalism. The physician believes

that the task of protecting the children should be left to the sovereign states and not to the Federal Constitution, where it is totally out of place. This stand of our State Medical Society was fully explained in our issue of April 1, and the seeming paradox of physicians eager to protect children from damage by overwork, and yet antagonistic to the amendment, was made clear.

We are entirely at one with the friends of the amendment in opposing improper work in childhood. We accept without question, proof that conditions over the country before the present codes came into being were unsatisfactory, and we do not doubt that some of the opposition to the amendment comes from those who put cash before humanity. Nevertheless, we reaffirm with conviction and without hesitation our belief that the amendment would invade the "elementary rights of children" at a deeper level than in the worst days of exploitation.

The truth is that there is no place in the constitution for such an amendment. It would work a greater harm than the evil it seeks to prevent. It would be misgovernment. It reads:

"Section 1. The Congress shall have the power to limit, regulate and prohibit the labor of persons under eighteen years of age.

"Section 2. The power of the several states is unimpaired by this article, except that the operation of state laws shall be suspended to the extent necessary to give effect to legislation enacted by the Congress."

To give to Congress "the power to limit, regulate and prohibit the labor" of 45,000,000 persons under 18 years of age is a mistake. In the American system the parents are charged with control of the children, under State laws which enforce proper schooling and care. When parents fail or die, children become the wards of the State. They never become wards of Congress and never should, unless indeed it be desired to abandon the principle of local government in favor of Sovietizing the land. Child supervision should not be given to Congress.

We do not believe that the proponents have any motives except a sincere desire to promote the young from brutal, harmful,

overlong work to the detriment of health, mental and physical development and education. We do believe, however, that, in their eagerness to do good they have paid too little attention to the fundamental features we have stated and to the possibilities for unwise Congressional control which are inherent in the amendment.

It is unfortunate we think, that the medical profession was not consulted ten years ago when the amendment was first promulgated. Its official organizations should have contributed not merely first hand data from practicing physicians of damages inflicted by what is called child labor, but could also have painted a picture of all the "elementary rights of children" which should be preserved. It could have shown the need for happy homes where children have time to play, time to learn from books and life, but where they also prepare, by study and emulation of adults, for manhood and womanhood. In particular, it could have stressed the value of steadily increasing responsibilities within capacity, in *work* of any kind, real work, just enough and not too much the "elementary right" to develop true mental, moral and physical strength through real experience.

To take control from the parents under the State laws would be to deprive the child of his deepest right—the right to grow up under the best supervision that American life can supply.

We repeat the JOURNAL believes in State laws to protect children. It further is of the opinion that in framing those laws the State governments should seek the aid and advice of organized medicine.

Better Team Work for Nurse and Doctor

Few are more competent to advise us on this important subject than Dr. Donald B. Armstrong of the Metropolitan Life Insurance Company, a member of the State Medical Society who has had a wide contact with nursing problems during his extended and useful career in health work. In theory as well as in practice the physician and the nurse constitute a team that

can work well only with understanding on both sides of the partnership. He told an audience interested in nursing a few weeks ago at White Plains. He was speaking more especially of the private medical practitioner, the general family physician, in his relationship to public health nursing organizations.

The "primary job" of the nurse, he frankly told his audience "is the supporting and upholding of the private family physician." The nurse is interested in preventive medicine and, if she will, she can help to promote the use of the private practitioner's preventive medical services and so not only improve her relationships with the doctor, but aid in opening up an important field of medicine. She can as she goes here and there, advocate health examinations, encourage early diagnosis of incipient disease, promote immunizations, recommend prenatal medical service, pre-school examinations, correction of defects, and so on.

Then, too, the nurse can guard against certain tendencies that may antagonize the physician and cause discord instead of harmony. These tendencies are contrary to both medical ethics and nursing ethics, and we may hope that they have disappeared entirely now, but they have been known to occur in the past and should be rigidly guarded against in the future. Dr. Armstrong mentioned among these such simple errors as the making of diagnosis, the prescribing and administration of therapeutic measures beyond the medically approved standing orders, contradicting medical advice, playing medical favorites, referring patients to specific physicians, and recommending a change of physicians. Nurses are often strongly tempted to make some of these errors but should realize that both medicine and nursing are best served by sticking to strict ethical practice.

The doctor for his part we are told does not appreciate how much the public health nurse can do for him. At least that has been Dr. Armstrong's observation—"he knows the nurse, but not the public health nurse." Dr. Armstrong relates that his company has been trying, in several large cities, to cut pneumonia mortality by

increasing nursing care. "We have approached the physicians," he says, "and urged them to call for the nurse. We have even agreed to share visiting nurse associations' costs, should these calls become excessive. Thus far little progress has been made," he adds with considerable heat and feeling, "primarily because the rank and file of physicians in our larger cities, with excellent nursing organizations, are scarcely aware of the existence of the nurses, don't know what they do or what they are supposed to do, do not know how to call them, and have an attitude toward them based on ignorance, or suspicion and distrust."

No doubt the doctors could say something on their side of this question, but whatever the cause, Dr. Armstrong urges the nursing organizations to "sell" their services to the doctors and convince them of their helpfulness. They should wipe out any existing causes of irritation and conflict. If the doctors are not calling in the co-operation of the nursing organizations, then it is safe to say that there are perfectly sound reasons for it, and the duty of the nursing organizations is to find what these reasons are and remedy them.

We Have Them Worried

The cocksure attitude of the managerial reformers who aim to regiment the medical profession seems to be wavering. Miss Frances Perkins, Secretary of Labor, and one of the chief backers of the scheme, now admits that there are "many difficulties in the way of health insurance, including the attitude of much of the medical profession." The President himself speaks of it as something that may come "soon or later on," which looks like putting it on the shelf for the present.

There has fallen into our hands a copy of a letter sent around by John B. Andrews, secretary of the American Association for Labor Legislation, to those who "favor early action looking toward the adoption of suitable health insurance legislation." The list of officers and "General Advisory Council" on the letter head reads like a Who's Who of the "general

advisers" of the nation who make it their business to tell everybody what to do. The letter is rather hysterically marked "Urgent" and declares that if the recipient favors health insurance "it is very important that you so wire or write to the President, at the White House, or to Miss Francis Perkins, Secretary of Labor, Washington, D. C., *at once*."

Here we have evidence that all is not going so smoothly as expected with the plan to "sovietize" American medicine. The doctors have had the temerity to speak up for themselves, and it is plain that many of them are doing so. Free speech is a cornerstone of our liberties, and the future liberty of the physician certainly rests upon his speaking freely, and forcibly, right now. If the friends of medical regimentation find it "urgent" to wire or write the President "at once," then it is just as urgent for the doctors to wire or write and express their opposition. The President has a right to hear both sides, and the side of the general practitioner is just as important as the side of these self-appointed "general advisers."

It is not unlikely that the busy physician, suddenly called upon to argue against state medicine, may not have all the points on the tip of his tongue, and may feel hesitant to approach his Congressman or Senator. For his benefit, and to refresh the memory of others, it may be useful to run over the chief points against the plan.

In the first place, our American medical service is, in many ways, adequate just as it is. We have more physicians per capita than any other land, and they give millions of dollars worth of free service to all who need. The quality is high, the rates of death and disease are falling and many diseases are being conquered. The national cost of medical service is less than the cost of many luxuries which the social reformers do not seem to worry about. In fact, we have more medical, hospital, and nursing service than the public calls for, and all health needs can be amply met by the present system without any reorganization.

Then, too, regimentation of the profession would inevitably break the fine per-

sonal relation between doctor and patient, politics would bring in an era of favoritism and perhaps of jobbery, graft, and racketeering, the doctor would lose his independence and be subject to the orders of lay managers and clerks, and the quality of the service would deteriorate.

Reports from foreign countries having health insurance systems say that the quality of service has not been bettered, the death rate has not fallen, and the sickness rate has increased—three times in Germany, two-fold in England. In Germany the insurance doctors are overwhelmed by patients who do not need attention, but wish to be "written sick" to escape work

and draw compensation. Moral deterioration results. Our experience here with workmen's compensation gives a hint of the evils that would creep in under health insurance.

Finally, if some form of mutual group practice is desired, why not let the doctors themselves devise plans which they know from their experience will meet the situation best? They have amply proved their wisdom and devotion to the public good, and are competent to perfect a system that will incorporate all that is desirable and avoid the evils and pitfalls in the ill-considered schemes of shallow enthusiasts.

A NEW SCRUTINY OF THE MEDICAL SCHOOLS

The medical schools are about to have another examination, to see if a weeding out or perhaps an elevation of standards is necessary. The number of students has grown to the point where some think we have an overproduction of doctors. Ten years ago, according to Dr. Thomas Ordway, of the Albany Medical College, the total number of students in the American medical schools was 17,728. In 1933 it increased to 22,799. The total number of graduates ten years ago was 3,562, last year, 5,038. In other words the total number of students in the schools increased 28 per cent in ten years, the total admissions 25 per cent and the total number of graduates 41 per cent.

Dr. William Pepper, of the University of Pennsylvania, notes that Washington is paying farmers for not raising so many hogs, and wonders if the government would not pay his medical college for not turning out so many doctors!

These remarks were evoked by an address by Dr. Ray Lyman Wilbur of Stanford University, Chairman of the Council on Medical Education and Hospitals of the A.M.A. Dr. Wilbur reviewed the radical shake up of the medical colleges a few years ago, and said that a new scrutiny has now become necessary. He said, among other things: "There has been a definite weakening in the fibre of certain of our institutions. A reinspection and study of them will be somewhat painful but it is absolutely necessary in order that no American boy or girl who proposes to go through the long struggle of studying medicine will be misled into putting his or her time in an inferior institution. We have become somewhat too complacent. Institutions recognized by the Council on Medical Education and Hospitals as belonging to the 'A' group have sometimes relaxed after they have achieved such classification. In a number of instances there has been serious debate in the Council on Medical Education as to whether this 'A' rating should or should not be withdrawn."

"We have been judging the medical institutions of this country by their physical plants, their budgets, the preparation of their teachers,

their hospital relationships, and many other factors. The real test is the quality of the graduate and whether he can fit into the active life of the profession and hold up his end of the work to be done."

"Of late we are beginning to discover a slowing down in some of our various medical schools. We can hardly speak of what we note as 'signs of senility.' They seem to be more the results of bad habits and unfortunate procedures than of age itself. In general, our difficulty is an overdose of self-satisfaction, together with too much complacency as to the future."

"This study of our schools should be complete, thorough and accurate, but it should weigh all elements and see each school in its own setting. Comparisons may be quite unfair. Results count."

Above all the situation demands that the study and analysis made be in harmony with the needs of the physician ten years ahead. We must try to pre-empt what he will be expected to do and should do, and plan our medical teaching to prepare him for it."

Research fellowships for the study of pharmacology, physiology, effect of sedative drugs on the horse and ox, alkaloids and bacteriology have been established by Merck & Co. at the Universities of California, Pennsylvania and Virginia.

A study of dermatitis attributed to socks has been made by Dr. Louis Schwartz, Senior Surgeon of the U. S. Public Health Service, who concludes that:

1. Careful investigations should be made in each case of dermatitis due to contact with dyed material to determine whether the material, the dye, or the finish is the actual irritant.
2. Allergic individuals should thoroughly wash the finish and the excess dye off new socks before wearing them.
3. A minimum amount of finishes should be used on socks by manufacturers, and these finishes should be as nearly neutral in reaction as possible.

News

of Interest to the Profession

LABORATORY AIDS IN THE DIAGNOSIS OF BACILLARY DYSENTERY

Bacillary dysentery, like plague, cholera, and influenza, has been one of the great scourges of the world. Although improved sanitation has now greatly reduced its frequency, the disease still appears sporadically or breaks out in mild epidemic form.

The occurrence of a group of cases with sudden onset of diarrhea with blood and mucus in the stools, should prompt the physician to obtain immediate laboratory aid in determining whether or not the epidemic is caused by dysentery bacilli. By such action an outbreak may sometimes be discovered early, the source recognized and eliminated, and the progress of the epidemic stopped. Frequently, however, the etiological agent is not identified, either because no stool specimens are taken for laboratory examination or because they are not taken sufficiently early. Furthermore it is important to remember that single or isolated cases of the disease may occur. In such instances, early laboratory examination of stool specimens may make possible an immediate diagnosis.

The incitants of bacillary dysentery have been found to be a number of different strains of dysentery bacilli which differ from each other more or less markedly. The severity of the infection usually varies, depending upon the particular strain involved. The most virulent form occurs very rarely in New York State.

When dysentery is suspected, the physician is required by state regulation to submit for examination to a laboratory approved for the purpose: (1) A specimen of feces; (2) ten c.c. of blood. Specimens of the feces must also be submitted before the patient is released.

LABORATORY AIDS IN DIAGNOSIS

I. Stool Cultures. It is usually possible to demonstrate dysentery bacilli in the stools at the onset of the illness. The chances of a positive culture decrease rapidly as time elapses. Specimens consisting of bloody mucus are the most favorable for examination. If specimens cannot be delivered immediately to the local approved laboratory, preservative is necessary and special containers provided with suitable preservative may be obtained from the local laboratory supply stations. Cultural examination of later specimens will sometimes yield positive results when the first specimen does not.

II. The Agglutination Reaction. Agglutination tests are of very little assistance as an aid in the diagnosis of bacillary dysentery. Serum from healthy individuals often agglutinates in a high dilution micro-organisms of the Flexner type which the serum from many cases of the other types does not agglutinate the incitant, at least during the early stages of the illness, in a sufficiently high dilution to aid in the diagnosis. However, specimens of the blood for agglutination tests should always be submitted for examination for evidence of typhoid and paratyphoid fevers.

III. Blood Cultures. Dysentery bacilli are rarely present in the bloodstream. Hence, blood cultures are of no help except in so far as they may aid in the exclusion of other types of infection.

Polyvalent antidysentery serum may be obtained from the Division of Laboratories and Research in Albany. Prompt administration of the serum is indicated in severe cases.—(New York State Association of Public Health Laboratories, October, 1934.)

THE ADVANCE OF SOVIETIZED MEDICINE

What has already been done to "sovietize" medicine in this country (to use an original term), Dr. R. G. Leland, Director of the Bureau of Medical Economics of the A.M.A., described recently in an address before the Iowa State Medical Society. After mentioning the lay-controlled schemes and the "fifty or more group hospitalization plans," he continued with a summary of the plans operating under medical control.

Dr. Leland's references to developments in New York State are especially interesting. He said, in part:

Already there is a tendency towards sickness insurance in certain sections of these United States. The entire State of Washington has been organized into what they call medical service bureaus which are essentially sickness insurance organizations giving medical service to certain sections of the population, mainly individual groups of a certain income level. In the State of Oregon there has been, for many years, a law which provides for the certification and registration of hospital associations, which are misnomers but are essentially the same as the medical service bureaus in Washington.

In California a committee of the State Legis-

lature and a committee of the California Medical Association has been working for the last year and one-half to determine the necessity for sickness insurance in that State. It is presumed that at the next session of the Legislature, which meets in January, 1935, a sickness insurance act for California will be presented for passage or consideration, Michigan has already made a very extensive study, and a committee of the state society has presented for the consideration of the House of Delegates a plan of sickness insurance for that state. This plan has not been accepted yet, but if it is accepted, that plan of sickness insurance will be placed in operation in two or three counties in Michigan.

More insidious and more dangerous to the future of medicine is a proposal that comes from New York, sponsored and presented by one of the great foundations of the country, the Milbank Foundation. This proposal comes as a plan to socialize or sovietize medicine in New York. If successful there, it would be an easy and logical development to proceed westward, and no one can predict how fast or extensive it would proceed.

All of these attempts to mechanize, to socialize, or to sovietize medicine are perhaps the strongest of the disturbing elements to physicians today. It is hard to tell just exactly what might happen were such an event to occur in these United States; but I can state truthfully that I see some comfort in the fact that I believe the American people desire their own physicians. They do not want the kind of medicine that is dealt out mechanically.

Unfortunately, all of these disturbing influences are not outside the medical profession. I have suspected for some time, and I now have some evidence, that there are a few within the medical profession who would sell out the medical profession for a mess of pottage. There is a group of physicians, about 500 in number, who constitute the League for Socialized Medicine in Brooklyn. There are physicians here and there, a few, who would sell out their own societies for a certain consideration. We must watch for these people. The promotion of socialization schemes is being furthered by the action and the attitude of some of these physicians.

SURGERY USED TO DEFEAT JUSTICE

Plastic surgery to change the faces of criminals and skin-grafting to hide their finger prints, are devices that must now be reckoned with by our agents of justice. "If we can char . . . have changed the . . ." says Dr. Howard . . . *American Journal of Surgery*. In other words, one disguised print would send the sleuths of the fingerprint bureau off on a false scent in a wrong section of the card-index.

Some of the tricks are vain, however. Thus skin grafts taken from one person and transplanted to another, or taken from animals, are seldom successful. Ordinary skin, too, taken from other parts of the body, with the exception of the palms of the hands and the soles of the feet, does not contain the characteristic ridges and will not develop them on transplantation. But certain areas of the palm and sole contain such characteristic ridges as are found on the finger tips, though not of the same group.

Dr. Updegraff reports a case in California

where the surgeon was reconstructing the burned hands of a patient. He covered the tip of the right forefinger with a skin graft from the palm, with similar skin ridge markings. In such a graft the ridges do not appear completely for several months, and even then the edge-scar of the patch and the scar where the patch was taken would betray the subterfuge. But if this sort of surgery is perfected, then what becomes of all our fingerprint system of detection? Besides, emphasizes Dr. Updegraff, if fingerprint classification is not to mean identification, we must realize that the criminal who is smart enough to have his fingerprints altered is going to have other surgical aid. Plastic surgery is being utilized to defeat justice by changing facial contours, removing scars, and so on.

When we have a national act requiring universal identification measures we must have not only fingerprints, but prints of the palms and soles as well. Added to this must be an up-to-date understanding of plastic surgery possibilities.

MEDICAL BROADCASTS

Scheduled under the auspices of the Medical Information Bureau of the New York Academy of Medicine and the Medical Society of the County of New York from Station WABC, Columbia Broadcasting System:

Thursday, January 3, 1935, at 11:15 A.M., 15 minutes.

Subject: "New Year's Resolutions."

Speaker: Dr. Smiley Blanton, Assistant Professor of Psychiatry, Cornell University Medical College.

Thursday, January 10, at 11:15 A.M., 15 minutes.

Subject: "Pneumonia."

Speaker: Dr. Jesse M. Bullowa, Clinical Professor of Medicine, N. Y. University Medical College.

Thursday, January 17, at 11:15 A.M., 15 minutes.

Subject: "Burns and Their Treatment."

Speaker: Dr. Fenwick Beekman, Attending Surgeon, Bellevue Hospital.

Thursday, January 24, at 11:15 A.M., 15 minutes.

Subject: "Oxygen and Pneumonia."

Speaker: Dr. Jesse M. Bullowa, Clinical Professor of Medicine, N. Y. University Medical College.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Illegal Practice of Medicine—A Quack is Convicted of Manslaughter

A glaring example of quackery is set forth in a case* which came before the courts of one of the Southwestern States a few years ago. A fake medical practitioner was convicted on a charge of homicide. A review of the facts in the case illustrates anew the menace to the public health of quacks of this character.

A certain "T. L." was suffering from a severe attack of grippe which was bordering on pneumonia. He had been ill for some time, and was slowly improving under the care of a competent physician. His temperature had been as high as 104, his pulse between 90 and 100, and his respiration above 30. His temperature was 100, pulse 85, and respiration 24 on the morning that the regular physician last saw him. On that day a certain "J. B." was brought in to attend the patient. This man was not licensed to practice medicine but despite that fact set about treating the patient according to his own ideas.

The first and apparently the principal step in the treatment was to brew a sort of tea made by parching and boiling hog hoofs that had been long thrown out as waste and refuse, and which had apparently become very filthy and putrid. He then administered considerable amounts of the concoction to the sick man, explaining to him and to his family, that the brew possessed remarkable curative qualities which would alleviate and cure the patient of the ailments from which he suffered. Part of the treatment administered by "J. B." consisted of his rubbing the limbs and body of the patient, and at the same time making a prayer or incantation. This quack also gave the patient a heavy dosage of some drug as a headache or fever powder. The treatment, so described, was continued for two days and the patient died.

The fake practitioner was shortly thereafter indicted for manslaughter in the second degree under a statute reading:

Any killing of one human being by the act, procurement or culpable negligence of another,

which, under the provisions of this chapter is not murder, nor manslaughter in the first degree, nor excusable nor justifiable homicide, is manslaughter in the second degree.

The case was tried and the defendant was found guilty of the charges and was sentenced to a two-year term of imprisonment in the penitentiary. From that judgment an appeal was taken to the highest court of the State, which affirmed the said judgment.

One of the principal contentions which the accused urged upon the appeal was that the evidence failed to establish that the death of "T. L." was caused by his culpable negligence. There was evidence in the record of the trial to the effect that in cases of illnesses such as the one in question, even with the exercise of the best of medical care and skill, there is a considerable death rate. According to certain testimony introduced upon the trial that mortality rate ran from 10 to 40 per cent of the cases. The appellant claimed that because of the said testimony the evidence of guilt amounted only to a suspicion, and the crime was therefore not proved with the degree of certainty required to convict in a criminal cause. The Appellate Court, however, adopted the view that the acts of the defendant were unquestionably one of the direct causes of the patient's death, and that the so-called cures were detrimental to the patient's life. In so ruling the Court said in part:

The treatment given the deceased by the defendant was not indicated for the disease from which the deceased was suffering; it in no way tended to alleviate the suffering or had any curative properties whatever. On the contrary, the treatment administered, considering the time it was given, was evidently detrimental to the patient's health. Defendant possessed no knowledge of the curative properties of medicine, was not licensed to practice medicine in the State, and was grossly ignorant of the manner in which the disease from which the deceased was suffering should be treated. The application of hands, accompanied with an incantation of prayer that the pain be transmitted from the body of the deceased to that of the defendant, the administering of hog-hoof tea and of the headache or fever powder at the time it was given, evidenced gross

* Barrow v. State, 188 Pac. 351.

ignorance and culpable negligence on the part of the defendant in the treatment of the disease.

The Court further said in its opinion:

The question here is not whether the deceased would have lived had he received treatment according to the care and skill usual among good practitioners of any recognized and authorized school, but did the treatment given and applied by the defendant contribute to and result in the death of the deceased, and was the defendant grossly ignorant of the manner in which such disease should be treated and culpably negligent of the patient in giving the treatment?

The crime here did not consist in the omission to perform some duty specifically imposed by law. Defendant owed deceased no duty; but having assumed to treat him for disease, defendant was bound to know the nature of the remedies he prescribed, and the treatment he adopted, and he is responsible criminally for a death resulting from gross ignorance and culpable negligence in such relation.

There is no question but that the ruling of the Court was correct. The defendant was a quack of the worst kind. He took over a difficult medical case and substituted his fake cures for sound medical practices. Everything he did was definitely detrimental to the patient's health. His conduct justly merited his conviction.

Plastic Operation on Nose

A man 28 years of age called to the attention of a general practitioner a scar on the side of his nose which he said had been caused by a stabbed bone some years before. The scar was about an inch and a half long with a well-outlined cicatrix. The doctor arranged with the patient to perform an operation for the purpose of trying to remove the scar and to improve the man's appearance. He put him under local anesthesia and made two straight-line incisions on each side of the scar and removed the scar. He then sutured together the skin and applied bandages. In ten days the sutures were removed and two days later it was necessary to treat a small infected blackhead at the side of one of the sutures. The patient came back for examination from time to time for about a month and the result seemed to be a decided improvement, the scar being considerably smaller than before the operation.

Plaintiff brought an action against the doctor in which he claimed that the doctor had so negligently operated upon the nose that the same was caused to be scarred and disfigured to a greater extent than before the operation. The case came on for trial and the plaintiff claimed that he had con-

sulted the defendant about the scar merely because it itched and that the operation was undertaken because the defendant had persuaded him against his will to consent to the operation. At the close of a two-day trial the issues in the case were submitted to the jury with verdict for defendant.

Alleged Negligent Removal of Tonsils and Adenoids

The defendant in this case was engaged to remove the tonsils and adenoids of the plaintiff, an infant of thirteen years of age.

The boy entered a hospital where the doctor performed the operation, removing his tonsils and adenoids. The boy was discharged from the hospital the day following.

A suit was instituted against the doctor alleging that he negligently performed the operation for the removal of the tonsils and adenoids and that as a result of such negligence the boy suffered a paralysis of the glands and muscles of the throat, head, and arms.

Upon investigation it was learned that this infant at one time had had an attack of spinal meningitis. Further investigation revealed that the infant also was suffering from a progressive spasmodic torticollis.

In the opinion of the physician who had made a physical examination of this infant subsequent to the operation, and who had also seen him over two years prior to the operation, the condition this infant plaintiff was suffering from was not dependent upon, nor in any way connected with the operation performed by the defendant.

It was brought to light that prior to the operation performed by the defendant an application for insurance on the life of this infant had been made by his parents and that the insurance company had refused to issue its policy because of this boy's physical condition.

This case which was instituted by the boy's mother (who had been appointed guardian *ad litem* for the purpose of instituting this case) was placed on the calendar for trial. The attorney for the plaintiff made various requests for adjournments and finally the case was marked off the calendar. Over three years elapsed and no steps were taken by the attorney for the infant plaintiff to prosecute this action. Thereafter, on motion of the defendant doctor, the action was dismissed for lack of prosecution and an order and judgment entered disposing of the matter.

Books

BOOKS REVIEWED

A Practical Treatise on Diseases of the Skin for the Use of Students and Practitioners.—By Oliver S. Ormsby, M.D. Fourth Edition. Octavo of 1288 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$11.50.

This fourth edition of Ormsby's book has been so completely revised and rewritten that it might well be considered a new work in dermatology. As such it is probably the most complete and practical book on this subject in the market to-day; and it has the added attraction of coming from a man with wide clinical and teaching experience, as well as real literary ability. His descriptions of the various dermatoses are written with the greatest clarity, and seem to more definitely conjure up the picture of the disease than any we have read.

The reviewer heartily recommends this book, knowing that it is a necessary part of any medical library.

E. ALMORE GAUVAIN

Physical Treatment by Movement, Manipulation and Massage.—Being the Third Edition of *Massage, Its Principles and Practice*. By James B. Mennell, M.D. Octavo of 618 pages, illustrated. Philadelphia, P. Blakiston's Son & Company, 1934. Cloth, \$6.00.

The first seven chapters of the latest revision of this instructive work describe massage, beginning with its physiology, general principles, various methods, and finally technic in detail.

Every type of apparatus is described that will restore diseased or injured parts to their normal functions.

The treatment of recent injuries, such as sprains, dislocations, and fractures includes immobilization methods, reeducation, massage, and physiotherapy.

The remaining chapters deal with the treatment of deformities and massage as used in internal medicine, neurology and postoperative care. This work makes very interesting reading and a handy guide for the prescribing of massage and manipulation.

JOSEPH I. NEVINS

Urinary Analysis and Diagnosis.—By Microscopical and Chemical Examination. By Louis Heitzmann, M.D. Sixth Edition. Octavo of 385 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$5.00.

The sixth edition of this work has been thoroughly revised. In Part 1, dealing with the chemical examination of the urine, there are some new tests but the author, as heretofore, describes only those tests which the physician can perform himself. Part 2, dealing with the microscopic examination of urine stresses the identification of epithelium from different parts of the genito-urinary tract. The author's studies in this field are so well known as to need no comment. In Part 3, he discusses the diagnosis of genito-urinary diseases chiefly by means of the microscopic examination of the urine.

Dr. Walter C. Dannreuther contributes a chapter on tests for determining the functional efficiency of the kidneys. He describes a number of practical tests.

The last chapter deals with the new hormone tests for pregnancy.

E. B. SMITH

The Principles of Gynecology.—A Text-Book for Students and Practitioners. By William Blair-Bell, M.D. Fourth Edition. Octavo of 848 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$10.00.

The fourth edition of this excellent book has been revised and largely rewritten with the assistance of M. M. Datnow, of Liverpool, and Arthur C. H. Bell, of London.

Since the previous edition was published, much that is new has developed in regard to internal secretions, ovarian neoplasms, and to the nature and treatment of malignant disease. The portions relating to these subjects have been entirely rewritten. New sections

and more than one hundred illustrations, including many colored plates have been added.

In addition to the subjects usually covered in textbooks on this subject, the author has included an excellent section devoted to operative gynecology.

The new edition is a very comprehensive and thoroughly up-to-date textbook.

W. S. SMITH

Applied Physiology.—By Samson Wright, M.D. Fifth Edition. Octavo of 604 pages, illustrated. New York, Oxford University Press, 1934. Cloth, \$5.50.

Careful revision throughout is apparent in this fifth edition, bringing its text into accord with results of research published since 1931. While the general plan of its contents remains largely the same as in the Fourth edition, many of its sub-topics have been rewritten and a number of paragraphs shifted so as to bring into more intimate relationship data bearing upon certain problems which, in previous editions, have been dealt with fractionally under separate headings.

Dealing, as it does, with the facts and concepts of animal physiology as applied to the interpretation of clinical syndromes as well as with the light cast upon certain physiologic problems by some clinical findings, it has earned a well-deserved reputation as a very valuable handbook for both students and practitioners of medicine.

J. C. CARDWELL

Vital Cardiology.—A New Outlook on the Prevention of Heart Failure. By Bruce Williamson, M.D. Octavo of 344 pages. Baltimore, William Wood & Company, 1934. Cloth, \$5.00.

This book takes as its thesis the view that the essential factors in an efficient action of the heart are rate and force. With this as a background, the various symptoms, pathological changes, and treatment are considered. The book is written from the purely clinical aspect, but the author appears to be well versed in the experimental work relating to the subject. The author expresses the views at which he has arrived as a result of his clinical experiences. Although all of these would not receive universal acceptance most of them are founded on sound reasoning. It is an interesting and well-written volume.

J. HAMILTON CRAWFORD

A Primer for Diabetic Patients.—By Russell M. Wilder, M.D. Fifth Edition. 12 mo. of 172 pages, illustrated. Philadelphia, W. B. Saunders Company, 1934. Cloth, \$1.75.

This primer is intended as a guide for both patient and physician. It has been written in nontechnical language, nevertheless the assistance of a physician will be required for its proper interpretation. No layman with a disease as serious as diabetes should attempt self-treatment. The book is a necessary adjunct to the patient who is working out a life complicated by diabetes under the care of his family physician.

S. GARSON SLO-BODKIN

Handbuch der allgemeinen Hämatologie.—Hrsg. von Dr. Hans Hirschfeld and Dr. Anton Littmair. Band II, Hälfte 2. Octavo of 1627 pages, illustrated. Berlin, Urban & Schwarzenberg, 1934. Paper, Rm. 60.00.

This second half of the second volume of the *Handbook of Hematology* completes what is indeed a monumental contribution to our knowledge of the blood in health and disease. It is a veritable encyclopedia, containing articles on everything of scientific value regarding the hematopoietic system. It is a *sine qua non* to specialists in the morphology and chemistry of the blood, a necessity for hospitals and clinical laboratories. It is a beautiful specimen of the printer's art and the context is written in clear style. The work is too cumbersome for a complete journal review, but numerous articles inspected at random make it clear that it is up to date in all respects.

J. M. VAN COTT

THE PSYCHOGENIC FACTORS IN ASTHMA

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The respiratory tract is the organ through which we first take in air, which is filled with residual air throughout life and through which we finally expire. It antecedes the alimentary tract in function. From its anatomical position it is closely connected with and embryologically evolved from the gastro-intestinal tract. These two systems are controlled to a very large extent by the autonomic nervous system and are susceptible to the psychic influences of fear, anxiety, and irritation. At times the oral cavity becomes directly a part of the respiratory apparatus. Further, taste and smell have a great psychological influence in affecting both the alimentary and respiratory functions. These senses are so closely allied physiologically and psychologically that occasionally they seem identical.

The factors determining the particular organ affected functionally in cases of psychic conflict have always been a baffling problem, toward the solution of which different types of investigation are being directed. Recently attempts have been made to correlate organ or system function and dysfunction with certain types of disturbance in libidinal development. For instance, Alexander¹ would interpret "the individual's emotional attitude to his environment in terms of the three major tendencies to receive, to retain and to give." He maintains that "the gastric symptoms often express and are conditioned by certain repressed, receptive tendencies—the wish to be taken care of and loved, whereas the intestinal symptoms often are called forth by the positive tendency to give and to be aggressive." He carries the interrelationship of psychic repression and organ dysfunction to its furthest limits in

the theory that peptic ulcer is a lesion found in a specific type of personality.

However, the gastro-intestinal tract is not the only triple function system. The respiratory tract likewise bears a triple duty of intake, retention, and expulsion of a foreign substance. The heart, a purely autonomic organ, also has a similar triple function, although the mind may not regard the blood as foreign. Other organs perform only a double function, intake and expulsion, namely, the nose, the skin, and to a lesser degree the eyes. In contrast with these are the urethra which only expels and the ear which is devoted solely to receiving stimuli. Similarly, the lower alimentary tract is also purely an organ of excretion.

In the psychoanalytic investigation of libido disposition, one finds that a large number of people suffer from the repression of a desire to be loved because attempts to obtain it in early childhood were repelled by parents or their surrogates. Such a narcissistic wound to the ego acts as a potent factor in the structure of many neuroses, even in compulsions and obsessions where conversion symptoms may play a slight rôle. The number of individuals deeply affected by such experience in infancy is so great that it is likely that among persons suffering from gastric ulcer one would find a considerable number of this type of personality. Further, either the respiratory or alimentary systems could equally assume the organic expression of the psychic conflict where the question of intake, retention, or expulsion is concerned. This would be especially likely where the receptive and enusive, passive, and aggressive, feminine and masculine tendencies exist in unstably balanced antagonism.

Based on a case presentation at the Annual Meeting of the Medical Society of the State of New York, Utica, May 15, 1934.

In contrast to such situations of a delicate balance of passive and aggressive tendencies, one would expect in cases of suppressed passivity that a purely receptive organ such as the ear would be psychologically disturbed. That this organ does actually function as a pathway for repressed passive (masochistic) needs may be inferred from the hostile, threatening character of most auditory hallucinations. Even the frequent symptom of ringing or buzzing in the ear may at times be interpreted as a signal of alarm or threat. Expellent organs such as the rectum and urethra would show dysfunction where aggression has been repressed.

The effect of emotional factors on the respiratory apparatus has been described in such conditions as sniffing tics,² the nervous cough, paroxysmal breathing, and asthma. The common cold³ in certain individuals seems to be preceded by (induced by?) mental depression, and pain referred to the accessory sinuses has in recent years become more and more a focusing point for emotional conflict.

In textbook discussions of "asthma," a large number of etiological factors are cited. For instance, Staehelin⁴ mentions inheritance, neuropathic constitution, allergic predisposition, vagotonia and sympathicotonia, arthritic constitution, exudative and eosinophilic liathesis, and exposure to asthmagenic substances, such as horse-hair, hay, and so on, and the connection of asthma with cutaneous disorders; viz., urticaria eczema, and the like. The psychogenic induction of attacks by the smelling of artificial flowers or by the fear of an attack in particular places and climates has frequently been observed. Staehelin records attacks arising after marriage which disappear when the patient is removed from her new home but which recur regularly on returning to the husband's residence.

Psychoanalytic literature contains several cases where detailed studies of unconscious mechanisms have been made and the close resemblance between the symptoms of stuttering and silent sobbing and asthma became apparent. Stegnann⁵ regarded asthma as an anxiety hysteria and Marciniowski also so considered it. Weiss⁶ interpreted the asthmatic attack as a reaction to separation from the mother upon whom the patient was strongly fixated, in a phase of a passive protectivity. He raised the question of the possibility that a sphincteric

anal spasm has been displaced from below upward to the respiratory tract.

When attacks of asthma originally caused by a psychic stimulus have continued over a long period of time they may produce actual organic change in the finer tissue structure of the bronchioles. These in turn predispose to bronchial complications, such as bronchitis, and even susceptibility to a terminal pneumonia.

The case which I shall report was afflicted by an emotional conflict centering about a repressed desire for love from her mother. This conflict seemed to be the strongest influence in the development of a disturbance in breathing which closely simulated asthma. As in most cases of this kind, it is impossible to exclude a constitutional organic weakness as the predisposing factor in the choice of organ affected even though no evidence of early deficiency in the respiratory system exists. However, it will be brought out that an accidental psychic incident may have been the factor fixating the major symptoms in the respiratory rather than in the alimentary tract, although the latter was also affected in its function of elimination.

CASE REPORT

Mrs. Grey, the mother who furnished such an important psychic influence in the life of the patient with asthma (Mrs. White), came under my care first in 1926. Mrs. Grey was at that time aged 56 and had been bedridden for 8 years. During this period she had suffered from "stomach trouble" which had been attributed to gastroptosis in two well-known medical clinics. The fear that she might aggravate the enteroptosis by standing kept her bedridden during all those years even to the extent of using a bed-pan. She had taken all varieties of cathartics and enemas for an obstinate constipation. Her daughter, the future Mrs. White, during all this time acted as a devoted nurse to the invalid mother. The latter was brought to New York on a stretcher from Plainfield, a town of about 10,000 in Ohio. Examination revealed a thoroughly nourished body. Nothing in the medical and neurological examinations or in the history warranted her chronic physical disability.

Investigation disclosed the following family situation. The patient had resided all her life in Plainfield where her father had been one of the prominent citizens.

She married a local man, socially her inferior. Shortly after the marriage she realized that she could never expect any success from her husband and took command of the family situation. The precarious financial condition of the family became chronic when about 8 years after their marriage Mr. Grey suffered from an illness for 3 years. Still Mrs. Grey exerted every effort for 20 years to retain a social position with her girlhood friends who had married more fortunately.

At the end of this period an event occurred which effectually shattered any hopes which she had retained for the rehabilitation of the family's social status. Her elder unmarried daughter, Mary, aged 20, became pregnant but the condition was not diagnosed until 5 months had passed. The predicament was solved by a forced marriage but the birth of a full-term child 4 months later furnished the town scandal and a crushing humiliation for Mrs. Grey. For 3 years she attempted bravely, even defiantly, to associate with intimate friends as though nothing had happened but the gastric distress in 1918 forced her to bed.

On suspecting this obviously probable causation, the author directed his efforts toward convincing the patient that such a flight into illness was unnecessary—that she could walk without great danger to herself—that her friends would respect her more well than sick, and so on. A few therapeutic conversations, supplemented by the tactful assistance of a nurse conversant with the situation, resulted in a dramatic recovery. She arose from bed, walked to the office and a month later the author saw her at her daughter's home merely to pronounce her cured.

Developments of the Asthmatic Illness.

Although from time to time the author had reminisced of the brilliant result, he heard nothing further of the patient until January, 1933, when her son-in-law, Mr. White, called to consult in regard to his wife's asthma. He reported that Mrs. Grey had been well for seven years, but from the observation of his mother-in-law's previous illness he had come to the conclusion that the asthma of Mrs. White might be a neurosis.

The history of the onset of his wife's illness was the following. Mr. White had returned from a business trip in October, 1930, with a "cold" which his doctor diagnosed as hayfever. Shortly thereafter—

about January, 1931—Mrs. White, aged 30, developed shortness of breath and a cough which a physician said was allied to asthma. She was under care of physicians continuously from January until April, 1931, when she had her first real asthmatic attack which confined her to bed for 5 weeks. She showed positive skin reactions to corn, cabbage, chicken, to dog's hair, and cat's fur. She had carefully avoided indulgence in or contact with these substances for two years with no relief of her symptoms. In April, 1931, her father, Mr. Grey, lost his position and Mr. White reluctantly assented to Mr. and Mrs. Grey's coming East to live with them. They took up their residence in the White household in July, 1931.

Although Mrs. White was up and about during the summer of 1931 she took from one to three hypodermics of adrenalin daily. In August, 1932, another attack occurred so severe that she could not cross the room because of shortness of breath. Mrs. Grey, still well and active, reversed her former rôle of patient and began to nurse the daughter day and night. Another violent attack in September, 1932, occurred while the patient was in the mountains where she had been sent for her asthma. During the early autumn of 1932 the patient was somewhat better but in October she became increasingly irritable and nervous and took to her bed until December. At that time she practically had attacks continuously, so severe that she was unable to leave her bed and was taking huge amounts of medication of a sedative nature and adrenalin hypodermically. She would inhale chloroform to induce unconsciousness and on several occasions had burned her face severely.

When the patient came under the author's charge in January, 1933, she weighed about 80 pounds, had been receiving intravenous injections of glucose, and seemed moribund. She assumed a very unusual position in bed. She sat with her legs folded underneath her perineum. One of the nurses observed that her heel was pressed very tightly against the vagina. She was bent over so that her head touched the bed. The rhythmic spasmodic contraction of the muscles of her neck bore no relation at all to her breathing. The latter was normal in frequency. However, expiration was accompanied by a wheezing sound. Her condition was so alarming that an internist was called in consultation so

that it might be determined if the withdrawal of drugs would be fatal. After considerable deliberation it was decided that the attempt should be made. The substitution of sterile hypodermics for adrenalin and inert preparations for the hypnotics and sedatives soon demonstrated that these potent drugs exerted little or no influence on the course of the illness, and so were gradually abandoned.

The progress toward recovery was extremely slow but it was demonstrated to both the patient and her husband that the attacks were entirely dependent upon reaction to psychic difficulties and that a hitherto unrecognized neurosis of her husband played a great rôle in the production of the wife's condition. The husband, although over-solicitous concerning his wife's health, showed no signs of affection for her, spoke to her only in short sentences and was exceedingly eager to be away from her presence. The wife soon began to openly complain of her husband's sexual indifference. He, too, entered treatment.

Early Family Background. Mrs. White, the daughter of Mrs. Grey, was the youngest of 3 children. It was the elder sister, Mary, who became illegitimately pregnant when the patient was about 12 years old. A brother, 4 years older than the patient, died at the age of 22 years. Mr. Grey, the father, was an extremely religious man, a lay preacher, lacking in energy and drive, and dominated by his wife. Mrs. Grey, the mother, proud of her distinguished local ancestry, had striven ever since her disappointing marriage to maintain her hereditary position.

As a child Mrs. White had been subject to tantrums and violent outbursts of temper. Her mother had raised the children with the greatest regard for the conventions. The patient from early childhood was discontented with herself because of her mother's high standards but made every effort to become popular. She was so self-conscious that she could never give a party in her own home and was intensely sensitive to any criticism. The patient relates that she had been so obsessed by false ideas of conduct that when at the age of 12 she visited a friend in another city, she did not use the toilet for defecation over a period of 8 days because she feared that the odor might be detected. She frequently would not urinate for a day.

She shared the extreme humiliation of her mother when her sister, Mary, became pregnant. External changes in her character now began to show themselves which seemed in contrast to her modesty and repression. From that time onward apparently she not only assumed the mother's rôle of upholding the honor of the family but also the rôle of father because of the latter's ineptitude. Even before she became the father of the family she was boyish in many of her interests and mannerisms and carried a boy's nickname up to the time she came for treatment.

When her mother took to bed in 1918 the patient assumed the entire care of the mother, including the function of bed-pan carrier. The patient consciously realized that the rôle of martyr was not without its advantages, for much as she disliked attending her mother, she received praise for it and often used it as an excuse to avoid more disagreeable duties and social obligations.

Mr. White was the brother of one of Miss Grey's girlhood friends. He also came from an extremely formal family where the mother played an important rôle. His father, a Methodist minister, was a man of some force. The White family, too, was proud of its social position although not quite to the same degree as the Greys. Mr. White had an intense family loyalty, so much so that while at college and for 10 years following he never missed returning home to his mother for summer vacations. He was extremely devoted to his work, political economy, at which he gradually achieved success. Up to the time he had married at 35 he had never had relations but was still indulging in masturbation. His social contacts with women had been few and superficial.

Our asthmatic patient had seen very little of Mr. White who was about 10 years her senior because he did not reside in the same town. It was a case of love at first sight but the question of marriage remained for some time in doubt because the patient felt it her duty not to forsake her bed-ridden mother. Finally, the wedding ceremony took place at the mother's bedside in 1925.

Mr. White's work made it necessary for him to establish his home in Albany at the time of marriage. His sexual contacts with his wife were infrequent and unsatisfactory because of his prematurity. From the very

beginning of their residence his wife insisted on returning to Ohio every two months to see her mother. Her intense concern and anxiety finally led to the trip of the bedridden mother to the East for consultation in 1926. After the mother's recovery she came to visit her daughter frequently. The author is now inclined to attribute Mrs. Grey's remarkable recovery not primarily to his explanations and reassurance. An unconscious reaction motivated by the gain which would accrue to the mother through visiting her daughter dispelled the previous secondary gain through illness. Because of Mr. White's disapprobation it had become increasingly difficult for the daughter to return so often to her mother, but the restoration of her mother's health made it possible for her to accept the burden of travel.

The married life of the young Whites on the surface appeared placid and happy. However, no real mingling of interests occurred between the reserved Mr. White and his energetic, ambitious wife who continued intent upon the preservation of the traditions of the Grey family. About 3 years after marriage a child was born who died almost immediately. Shortly thereafter Mrs. White became pregnant a second time and gave birth to a boy. She claims that during her pregnancy she was proud of her condition. After the child was born she became extremely oversolicitous of him.

At the time she came for treatment she had developed a strong hatred of the boy, then aged 3, whom she would punish by spanking and over correct continually. Mr. Grey became impoverished so that the support of Mrs. White's parents devolved upon her husband. When they came to live with the young couple, the husband became more reserved, less communicative to his wife, and retired more and more within himself. On the other hand, Mr. White's parents, especially the mother, became more and more critical in their letters of the Greys and young Mrs. White. The mere mention of her mother-in-law would cause an intense outburst of suppressed rage in Mrs. White. Yet, she feared to attack her mother-in-law because of her husband's attachment to his mother.

ANALYTIC INTERPRETATIONS

In the course of the analysis it became apparent that the patient's exaggerated

anxiety for her mother represented an overcompensation for intense hostility based upon the patient's resentment to her own sex. Although the daughter made much of her desire to care for the mother, she hated the irksome tasks, especially the emptying of bed-pans, for the eight years that her mother was ill. The illegitimate pregnancy of her sister may be regarded as the external circumstance which precipitated the neurosis of both the mother and daughter. While consciously condemning the erring sister, Mrs. White secretly envied her because she saw in her sister's condition a fulfillment of heterosexuality which she believed she could not attain. As a protection against the possibility of following in her sister's footsteps, she began more and more to identify herself with the male. When the family financial situation became stringent, the patient replaced the father.

The patient suffered from inner tension from the age of 5 or 6. She would not remain at a stranger's house over night because of her worry over defecation, nor could she evacuate if there were people nearby in her own home. On the other hand, she had no feeling of disgust if people defecated before her. Her bowels had not moved without cathartics for over 16 years. The analysis disclosed that the patient held the infantile theory of birth per rectum which equates the constipation with denial of child birth. The constipation may, however, also be interpreted as signifying an overcompensation for a desire to vent her resentment on the world at large.

When the patient came for treatment it was noticed that the nipples of her small breasts were usually in a state of erection and well developed. The patient subsequently stated that she had always been extremely ashamed of her breasts as indicative of her sex and had bound them tight to prevent their growth. She wore a menstrual pad, bound tightly, day and night when not menstruating.

As evidence of similar suppression it must be mentioned that the patient almost never cried because she considered it a feminine trait. When her brother died her lids became pimply and red which the family doctor attributed to the fact that she suppressed weeping.

The choice of mate in marriage was unconsciously determined on both sides by the mutual recognition of complementary

qualities in each party. The wife began to assume the masculine rôle in the couple's infrequent relations. She also found it possible to avoid too long association with her husband by frequent trips to the mother—all of which suited the husband.

The birth of the child after four years of married life tended to bring about the first definite rift. From the analytic interpretation, the child, in addition to removing her from her husband, represented definite evidence of her femininity and a sin like her sister's. Prior to the birth Mr. White had been engaged in a field of economics which did not interest him. He had been dissatisfied with both his work and remuneration and had turned to his wife for commiseration. Just before the child was born he received a position entirely to his liking which absorbed all his interest. This permitted him to revert to a life which was almost asexual but which because of the increased opportunity for sublimation he found acceptable. A change in her husband at this time made the acceptance of motherhood more difficult for the patient.

It will be remembered that the husband suffered first from some type of nasal affliction, diagnosed hayfever, and shortly thereafter the patient began her attacks. This accidental circumstance furnished a determinant for the form of the patient's illness. The identification with masculinity caused her to unconsciously adopt the husband's symptoms which were nasal (nose equates penis).²

It is also possible to point to an accidental psychic factor in early childhood as a determinant of the later consequence—asthma. When the Greys were compelled to vacate the ancestral home, it was bought by an old gentleman with asthma. The patient, then about six, was mystified and fascinated by the old gentleman's dramatic attacks. It was, to her, an aristocratic disease belonging to the rich man who succeeded her unsuccessful father. In other words, a disease characteristic of men and found in the wealthy—fashionable in much the same sense as appendicitis thirty years ago or sinusitis today. It is conceivable that this early impression reactivated by her husband's hayfever accounts for the choice of respiratory expression of her conflict between aggression and passivity.

In her personal relationship to Mr. White there existed good reason for resentment to him. Soon after marriage

she began to harbor antagonism because of his over-attachment to his mother and his failure in marital obligations. It was fed by her own unconscious homosexuality. At the same time the sense of guilt for the unconscious antagonism to her mother kept alive an overwhelming overcompensatory compulsive desire to defend and serve her. The painful dilemma in which the patient found herself now becomes apparent. The mere mention of the White family makes her "wish to explode." A counter impulse checks this tendency and causes her to hold her tongue and her breath. The compromise attempt results in the wheezing symptom called asthma. The patient remarked that when the attacks ceased the sensation of inner tension increased and the muscles in the back of the neck became more taut.

Let us recall that while at home the patient was the head of the house and proud of it. Here the unconscious masculinity had free play. The old home represented domination in her masculine rôle; the home with her husband implied the assumption of femininity. The attack then becomes a struggle between two forces which may be designated by the terms aggression and submission, expulsion and reception, sadism and masochism. The patient's unconscious gain through illness is revenge against both her mother and husband at the cost of almost inconceivable self-punishment.

Course of the Illness. Obviously, one could not expect any permanent results in the symptomatic cure of Mrs. White's illness without a change in her husband. His analysis indicated that he suffered from that form of psychic impotence dependent upon unconscious identification with the mother. The depth and the intensity of the attachment to his mother and its influence upon his sexual life had never been conscious to Mr. White. He had believed that the interest was all on his mother's side, and while it was true that the mother entertained jealousy toward young Mrs. White, it was equally true that her interest in him was superficial.

The most difficult actual task concerned the separation of the patient from her mother who had been living at the patient's home for two years. The thought of separation or the discussion with the husband of financial arrangements for the Greys would throw her into violent breathing attacks. Finally, it was agreed after four

months of treatment that Mrs. Grey leave her daughter. By this time both Mrs. White and her husband had gained sufficient insight into the psychogenic nature of their trouble to co-operate with each other and with the physician.

One of the most critical phases concerned the withdrawal of the hypodermics. The patient had regarded them as her talisman and the information that sterile water had been substituted for adrenalin alarmed her, as the deprivation of a guiding hand might terrify a child crossing the street. Gradually, the intervals between attacks became longer and the couple were able to go on an automobile trip in August, 1933. However, the attachment to the mother was not broken and again before Christmas the patient fell into tremendous conflict between the desire to stay with her husband and to return to Plainfield. The conflict soon found expression in respiratory symptoms which now for the first time resulted in a true bronchopneumonia.

After January 1, 1934, the author's contact with the case became intermittent. When she recovered from the bronchopneumonia the asthma was replaced by periods of mental unrest closely resembling manic excitement which lasted about a month. She talked a great deal, particularly concerning her wish for her mother to return and the shortcomings of her husband.

Certain practical considerations interfered with the treatment. The patient resided at some distance from New York so that the cost and difficulty of transportation in addition to the cost of treatment began to weigh heavily upon her. It reinforced the general worry about the financial obligations to her parents in which the marriage had involved her husband. The husband, under the necessity of earning a livelihood, was compelled to be away from home much of the time and could come only irregularly for his own treatment. The patient felt that he was neglecting his responsibility in the situation and that the author indulged him in this direction.

When doubt assailed her in connection with her divided allegiance, the increased breathing returned. It became acute in May, 1934. She reverted to rash injections of adrenalin and strong sedatives. During this time her only attendant at home was a well-meaning but ill-advised Irish maid who gave medication freely. Her family physician called from time to

time and saw her shortly before her death in June. The death which occurred suddenly was ascribed by her physician to "choking following the aspiration of mucus."

COMMENT

The sequence of change in libidinal expression in this case was the following: identification with the mother, denial of love by the mother which induced antagonism, subsequent identification with the father with repressed overcompensated hostility to the mother, a strong unconscious aggressive urge opposing an equally strong conscious passivity. The outstanding feature is the inability to yield completely to the desire to be loved by the husband and a suppression of the impulse to love (hate) her mother.

Although fatal termination occurred in June, 1934, it must be recalled that the death of Mrs. White through exhaustion seemed imminent in January, 1933, when the psychological approach was adopted. In spite of the fatal outcome this much was demonstrated during the year and a half which preceded her death: (1) That psychological stimuli set the attacks in motion; (2) that the so-called specific allergic determinants had nothing to do with the attacks. She ate chicken freely, likewise corn and cabbage in season. The presence of cats and dogs in her own home did not induce attacks, notwithstanding her positive reaction to the fur of both these animals; (3) that the asthmatic attacks were substituted by emotional outbursts quite like manic attacks.

Through the psychological approach a new basis for the understanding of the illness of both husband and wife was introduced. From the theoretical aspect a solution of the psychological factors could have occurred had not practical difficulties interfered. Mr. White's relative impotence was only partially cured but even with a small amount of treatment his confidence in himself increased and also his business capacity in many directions.

In conclusion one may say that psychoanalytically the asthmatic attack represented the cry of the infant for the return of the mother only in a most superficial interpretation. At a deeper level of mentation it is a manifestation of a conflict concerning emission and reception, domination and submission, unconscious masculinity and conscious femininity. In its immediate

form the conflict was one of conscious submissiveness to the mother and unconscious desire to dominate her; conscious reverence for the husband with an unconscious desire likewise to dominate him.

112 WEST 59TH STREET

REFERENCES

1. Alexander, Franz: *Bulletin of the Institute for Psychoanalysis*, Chicago, 1932-1933, p. 25.

2. Oberndorf, C. P.: Submucous Resection as a Castration Symbol, *International Journal of Psychoanalysis*, 10:228, 1929.

3. Menninger, Karl A.: Some Unconscious Psychological Factors Associated with Common Cold, *Psychoanalytic Review*, Vol. 21, No. 2, April, 1934.

4. Stachelin: *Handbuch der Innere Medizin*, Vol. 2, Pt. 2, p. 1239, Berlin, Julius Springer, 1930.

5. Stegnann, A.: *Zentralblatt Psychoanalyse*. Vol. 50, 1911, p. 377.

6. Weiss, Eduardo: Psychoanalyse eines Falles von Nervösen Asthma, *Zeitschrift für Psychoanalyse*, 8:454, 1922.

KEEP AN EYE ON ALBANY

The State Legislature has convened for what may be a momentous session. For one thing, the friends of health insurance are almost sure to introduce a bill to make it law in this state. And, adds the *New York Medical Week*, this is not the only threat confronting the profession. If it were not for Governor Lehman's courageous veto, the osteopaths would have succeeded last year in putting a law upon the statute books empowering them to employ drugs and perform surgery. They are not going to let this year go by without making another attempt. The antivivisectionists will seek to cripple scientific investigation by barring dogs from research laboratories. Physiotherapy technicians, chiropractors, cosmetologists, and who knows what others, will try to destroy the force of the

Medical Practice Act. They will bear watching.

Equalled only by health insurance in its importance to physicians, the Workmen's Compensation Act will undoubtedly come up before this Legislature for revision. The profession is vitally interested in enactment of the reforms advocated by the Governor's Medical Advisory Committee and in blocking any attempts, by the State Fund or any other group, to set up a monopoly in the treatment of this class of patients.

Medicine must be prepared to act, and to act promptly, to defend its rights. Collective action by professional organizations will not suffice unless physicians in the capacity of individual citizens bring the pressure of their opinion and that of their lay friends to bear upon the legislators at Albany.

ON GETTING STARTED

To gain the recognition of a community and to win its confidence as a practitioner of medicine and surgery is a task not easy, nor quickly accomplished. The mere making of a living and the amassment of money is the least of its features. Money can be made by any mountebank; such is the ignorance and credulity of men in general that anyone with assurance, who is willing to reiterate with sufficient positiveness and repetition even the most groundless and absurd claims, can obtain for a time the credence of a multitude, will draw after him a following and may coin his pretences and their credulity into riches. The methods of the market place, the strife of the exchange, the standards of commerce and trade, the advertising columns of the public press, the practices of the political platform, the enlistment under the banner of a special creed for which claims of peculiar efficacy are made, are however, all so inconsistent with the essential nature of medicine as a science, and with the peculiar personal intimacy of the duties and the sacredness of the relations of the physician in the practice of his art that they have always and everywhere been regarded a repugnant to the true spirit of the medical profession and have been repudiated by high-minded physicians.

Invariably just so far as they are resorted to by individuals who are striving to gain the confidence of a community as practitioners of the

healing art, do such individuals lose the special regard due them as physicians, while at the same time they diminish the respect with which that calling as a class has always been regarded. To bring help to a suffering fellowman, to devote one's life to the attainment of the highest possible skill and excellence in such a calling, such a thing truly is worthy of the highest praise and sure to command the admiration of men as long as men must suffer and die! Every true physician is therefore a priest serving at the altars of Humanity.

There is, however, to the physician's life another and more practical side that cannot be ignored. A high ideal of the character of one's profession does not of itself bring bread and butter to the struggling devotee. To provide for one's family, and to forestall the needs of the days of lessened ability and acceptability that come with advanced years, is a duty equally sacred with the special claims of his calling. In all countries and ages it has been ordained that a priest should live of the altar. There is nothing inconsistent therefore in the expectation of the physician that there should come to him freely from the recipients of his skill and attention, a return measured only by the importance of the service which has been rendered and by the ability to give of the person served.—(L. S. PILCHER, in *A Surgical Pilgrim's Progress*, 1894.)

THE NON-DRAINAGE TREATMENT OF PERITONITIS

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ABSTRACT

The purpose of this paper is to call attention to well established facts concerning peritonitis and to urge a wider application of physiologic principles in the treatment of this disease.

We are prone to forget that before the present era of abdominal surgery many patients recovered from peritonitis without operation. Perforated ulcers of the stomach and duodenum were closed by adhesions, appendiceal abscesses ruptured into the cecum, pelvic peritonitis became localized and the pus was absorbed or rendered sterile, all by action of normal peritoneal defenses. The important point is that recovery depended on a quarantine of the infecting lesion. If adhesions failed to stop the stream of infectious material, the patient died. It was only when continuous reinfection was halted that recovery ensued.

The advent of modern surgery brought a great reduction in the mortality of all types of peritonitis. Removal of the source of infection was always accompanied by drainage and often by quarantine packs. The only exception was in tuberculous peritonitis in which the invariably fatal result of drainage soon led to its discontinuance. It was discovered that in this disease the mere opening of the abdomen, with evacuation of the ascitic fluid and closure without drainage resulted in a high percentage of cures. There seemed to be no rational explanation and surgeons accepted it as a fact *sui generis*, unique and with no bearing on other forms of peritonitis.

Few if any attempts were made to apply the same treatment to ordinary pyogenic peritonitis until about the third year of the World War. At that time, British Army surgeons made their epochal discovery that multiple perforating wounds of the intestines were almost always fatal when treated by drainage either with or without suture of the perforations, but that careful suture of the perforations, flushing of the peritoneal cavity, and closure without drainage reduced the mortality to between 50 and 60 per cent.

About thirty years ago Ochsner had a prophetic glimpse of the truth when he

advocated his starvation treatment of appendicitis with delayed operation. He realized that the peritoneum could be trusted to take care of widespread infection and to wall off an abscess in the region of the perforated appendix. It seems strange now that nobody took the next logical step by using the same treatment *after* instead of before the removal of the source of infection. Today we know that the same peritoneal resistance which in the Ochsner treatment overcomes a spreading peritonitis is hampered rather than aided by drainage tubes.

Why is drainage so generally attempted? Medical historians will some day point to the era of promiscuous drainage, now happily ending, as an example of surgical meretriciousness. Its futility in diffuse peritonitis has been repeatedly proven both clinically and experimentally. To justify this statement we would call attention to some of the recorded data.

In 1905, Yates¹ demonstrated the inefficiency of cigarette drains in the peritoneal cavity. The drains were always promptly walled off.

In 1917 the startling reduction in mortality which followed discontinuance of drainage by surgeons of the Royal Army Medical Corps has already been mentioned.

In 1919, Hertzler² using methylene blue in an albumen solution found that drainage ceased in less than eight hours. He cites the similar results obtained by Petroff and others, all showing that drains were completely isolated from the general peritoneal cavity in from six to forty eight hours.

In 1924, Sir Henry Gray³ published a discussion of the whole problem of drainage. His paper is a most logical summary of conclusions drawn from a vast experience in both civil and military surgery. He is emphatically opposed to drainage in peritonitis except in (1) cases of persistent oozing of blood from the surface of an abscess cavity and a condition of the patient necessitating rapid operation, and (2) a shaggy irregular lining covering the surface of the abscess. He stresses the importance of removing the source of in-

fection, and says, "Intra-abdominal drains do not drain the abdominal cavity except the small part which they themselves are irritating. The rest of the cavity is quickly shut off by the formation of adhesions."

In 1932 Shipley and Bailey⁴ reported having four patients who after operation for appendiceal peritonitis developed mechanical obstruction due to angulation of an intestinal loop in the drainage tract. Two of them died. In all four cases they found that "the remainder of the peritoneum was free of adhesions or any evidence of peritonitis." Following this experience they operated without drainage on forty-eight patients with early peritonitis either local, spreading or diffuse with no deaths and no serious complications.

Marchini⁵ reported a series of 443 cases of peritonitis of which 301 were localized and 142 were diffuse. Of the total number 285 were drained, with 40 deaths, a mortality of 14 per cent. The remaining 158 were not drained and 9 died, a mortality of less than 6 per cent.

Mensing⁶ states:

Drainage of the peritoneal cavity in cases of generalized peritonitis is generally ineffective and is usually harmful. . . . The futility of drainage in general peritonitis is readily seen when it is recalled that the peritoneal cavity cannot be drained in the ordinary case of general peritonitis and that contamination of the blood stream by bacteria and their toxins had occurred long before drainage was instituted.

These clinical reports accord perfectly with the results of animal experimentation. Dixon and Rixford⁷ have shown that normal peritoneal fluid contains about 2,300 white cells per cu.m.m. Inflammation increases the number, first of neutrophiles and later of histiocytes, which are still more powerfully phagocytic. In forty-eight hours after the injection of mixed streptococcus and colon bacillus vaccine the white count averaged 44,300. In one patient, the peritoneal cell count rose from 3,370 to 163,000, forty-eight hours after vaccination.

In 1931 Buchbinder, Droegmueller, and Heilman⁸ in a series of experiments demonstrated the importance of removing a septic focus and of closing without drains. To provide a septic focus they opened a loop of bowel and made an end to end anastomosis of the segments above and below the section. Of 31 animals so treated, 90 per cent died of peritonitis. They then

repeated the experiment on 33 animals, but at the end of 24 hours removed the source of infection by excising the open loop of bowel and closing the abdominal incision. Of these animals, 14 recovered.

In a third series of 20 animals the same two operations were performed except that two drainage tubes were inserted, one in the upper abdomen and one to the pelvis. All of these animals died, two during operation, the others after an average period of four days.

Many other competent surgeons have reported improved results after they have abandoned drainage. We have been able to find no report of higher mortality following omission of drains. In January, 1929, we rather tentatively began to eliminate drainage in operations for peritonitis. At first we closed the peritoneum in cases of gangrenous appendicitis without gross perforation but with turbid peritoneal fluid. It was at once apparent that with these patients our results were better than when we had drained. However, in some cases where we closed the skin completely or around a subcutaneous drain, infection of the fatty or aponeurotic tissues appeared in from 3 to 5 days. Permeability of the gangrenous wall of the appendix permitted infection of these relatively non-resistant tissues. Then we closed the muscles loosely and packed the entire outer wound with B. I. P. gauze. When this gauze was removed in three or four days we almost always found a clean granulating wound which could be safely closed with interrupted silk or silkworm gut sutures.

The next step was the closure of the peritoneum in cases of perforation with free purulent fluid and no adhesions. In spite of our conviction that this was a logical procedure we were amazed to find that the temperature dropped to normal in from 24 to 72 hours, and that the postoperative courses did not differ from that of simple acute appendicitis.

We have analyzed our last 250 cases of acute appendicitis with special attention to the mortality in relation to the state of the disease and to the causes of death.

Cases of uncomplicated acute appendicitis constitute the first class. There was gross evidence of inflammation including one or more of the following: Redness, swelling, pus in lumen, ulceration or diffuse necrosis of mucosa, fresh omental adhesions, free peritoneal fluid. Except in a

few of the earlier cases, all of these were closed without drainage

There were 155 of these cases with no deaths

In the second class were 41 cases of gangrenous appendicitis with involvement

of the peritoneal coat but with no gross perforation. Of these 5 were drained because the appendix was retrocecal or retroperitoneal; 8 had localized suppurative peritonitis. All of these were drained for a few days. Three had diffuse spreading

TABLE I DEATHS FOLLOWING DRAINAGE

Age Case No	History	Findings	Operation	Date of operation	Date of death	Comment
I Age 50	Onset 4 days before operation Diagnosis Pelvic peritonitis probably from diverticulitis of sigmoid	Lower half of abdomen full of thin purulent fluid. No adhesions. Gangrenous and perforated appendix hanging over promontory. Intestines red and distended.	Midline incision. Appendix removed. Large cigarette drain to pelvis. Enterostomy.	May 8 1927	May 26	See comment below
II Age 49	Pain tenderness in gallbladder region 4 days before admission. Vomiting, fever, and tenderness over appendix 3 days later.	Abdomen full of thin turbid fluid. No adhesions. Perforated appendix at outer side of cecum. Gallbladder acutely inflamed and covered with fibrin.	Right rectus incision. Appendix and gallbladder removed. Large cigarette drain to appendix stump. Spreading gangrene of abdominal wall. Disruption of wound on 9th day with escape of bowel. Stinking necrotic fascia removed. Bowel replaced with silk worm gut. Closure with spreading necrosis until death two weeks later.	April 10 1929	May 5	Spreading gangrene of abdominal wall
III Age 35	Physician's wife. Severe type of diabetes. Recurrent appendicitis for 2 years. Sensitive mass with pain and fever for 2 weeks before operation.	Large bulging abscess below right costal border, well walled off.	Procaine anesthesia. Vertical incision. Peritoneum nicked with knife. Gush of stinking pus under pressure. Cavity explored with finger. Appendix not found. Large rubber tube drain.	Sept 14 1929	Sept 29	Coma
IV Age 3	Onset 4 days before admission. Catharsis and enemas. Ileus, vomiting, and cyanosis on admission. Abdomen distended.	Abdomen full of thin yellow fluid. Intestines red and distended. Perforated appendix lying outside of cecum. Surrounded by large abscess full of thick stinking pus. Patient in extremis.	McBurney incision. Appendix removed. Wound left wide open. Abscess cavity packed with gauze.	Feb 2 1932	Feb 4	No improvement. Death from toxemia.
V Age 63	History of gallstone colic. Pain and nausea for 48 hours before admission. No signs of peritonitis.	Gallbladder full of stones. Large retrocecal abscess around gangrenous appendix. No peritonitis.	Right rectus incision. Abscess cavity opened by incising parietal peritoneum just below cecum. Ureter and iliac vessels exposed. Appendix inaccessible, not removed. Large rubber drain through stab wound.	Aug 11 1932	Aug 15	Progressive toxemia.
VI Age 44	Acute onset 10 days before admission. Remission after 3 days. Return of pain, vomiting and fever after catharsis.	Stinking thin pus filling abdominal cavity. No adhesions. Several fecaliths free in abdomen. Appendix necrotic and separated from cecum with large opening in cecum discharging feces.	Midline incision. Cecum closed with purse string suture. Pelvis flushed with saline. Large cigarette drain to cul de sac.	Oct 1 1932	Oct 2	General peritonitis. Moribund on admission.
VII Age 47	Acute abdominal pain and nausea for three days before admission. Cathartics and enemas.	Appendix completely gangrenous. Large perforation. No adhesions. Abdomen full of thin stinking pus and feces. Adjacent peritoneum grey and necrotic.	McBurney incision. Appendix removed. Wound left wide open and packed with gauze.	Nov 11 1933	Nov 14	Progressive toxemia.
VIII Age 39	Pain in right lumbar region for 7 days. Patient walked in. Palpable tender mass in right loin. Temp 99.	Large abscess cavity behind cecum, containing gangrenous and perforated appendix. No peritonitis. 4 days later diarrhea with foul black liquid stools. Vomiting relieved by nasal suction. Sphagea. No fever. Death from exhaustion. Autopsy showed multiple thrombi of mesentery with necrosis of mucosa. Small bowel filled with black liquid blood.	McBurney incision. Outer leaf of mesocolon divided. Appendix removed. Abscess cavity sponged and packed with gauze. Wound left wide open. Black stinking fluid after removal of pack on 3rd day. Blood transfusion intravenous glucose repeatedly. Cecostomy on 9th day. Mucosa dark purple color.	Jan 11 1934	Jan 26	Multiple mesenteric thrombi with venous bleeding from bowel. Death from hemorrhage and starvation.
IX Age 58	Sudden epigastric pain 30 hours before admission. Question of perforated ulcer or appendicitis.	Thin purulent fluid filling abdomen. No adhesions. Appendix retrocecal. Gangrenous and perforated.	" "	April 4 1934	April 6	Toxemia.

peritonitis. Two of these were among our earlier cases and were drained; one was not. Combining the figures for this group, 15 were drained and 26 were not. There were no deaths in this series.

The third series is constituted of 54 cases of perforative appendicitis with gross leakage of appendiceal contents. In 27, or one-half of these patients, the peritonitis was limited by adhesions although in some of them the pus filled the pelvis or a large part of the right half of the abdomen. Of these 17 were drained with 4 deaths, a mortality of 23.5 per cent. Ten were not drained and one died. Mortality, 10 per cent.

The other 27 patients all had diffuse spreading peritonitis with no discoverable walling off; 11 were drained with 5 deaths (mortality 45.5 per cent); 16 were not drained and 2 died (mortality 12.5 per cent). It is significant that of the three undrained fatal cases, none died of peritonitis, although one death may justly be charged to our failure to realize that drainage was indicated. (See Table II, Case XI.)

Combining the figures for localized and diffuse peritonitis, we find that 28 were drained, with 9 deaths (mortality 32.15 per cent); 26 were not drained, with 3 deaths (mortality 11.11 per cent).

Since 3 of the drained cases were prac-

tically moribund and because some of the deaths were apparently inevitable with or without drainage, a more accurate evaluation of drainage may be obtained by eliminating these cases from our compilation. Admitting the debatability of our selection, we feel that it is proper to omit Cases II, III, IV, V, VI, VIII, X, XII. The revised figures would then be: 22 cases drained, with 3 deaths (mortality 13.6 per cent); 24 cases not drained, with 1 death (mortality 4.17 per cent). It is interesting to note that the one death in the undrained series resulted from an entirely extraperitoneal infection after all of the peritonitis had disappeared. (See Table II, Case XI.)

The tables show the salient features of each of the fatal cases. In the light of our more recent experience there are some points in regard to the cases worthy of comment.

CASE I.—Here the error in diagnosis resulted in a midline incision. Enterostomy is still advocated by some surgeons as a routine in similar cases. With a McBurney incision, no enterostomy and closure of the peritoneum this patient would have had a better chance to survive.

CASE II.—This was a typical case of spreading gangrene of the abdominal wall occurring before cautery excision was known to us. With present-day treatment this patient probably would have been saved. Peritoneal drainage was not a factor.

CASE III.—Diabetic death after patient returned to her home. No question about drainage.

TABLE II. DEATHS FOLLOWING NON-DRAINAGE

Age Case No.	History	Findings	Operation	Date of operation	Date of death. Comment
X Age 27.	7½ months pregnant. Upper abdominal pain for 3 days before admission. Gallstones suspected.	Perforated appendix lying at outer side of colon. Tip pointing upward. Stinking thin pus filling right side of abdomen.	Transverse incision. Pus removed with moist gauze sponges. Peritoneum and muscles closed. Wound packed with Bipp gauze.	July 11 1932	July 18. Apparently convalescent when miscarriage occurred on 7th day followed by collapse and death.
XI Age 35.	Left abdominal pain for 3 days.	Appendix gangrenous and perforated. Entirely retroperitoneal under root of mesentery. Tip lying anterior to dorsal vertebrae. Entire abdomen full of thin pus. No adhesions.	McBurney incision. Appendix removed, exposing retroperitoneal tissues. Fluid aspirated. Incision closed. Ileus with persistent vomiting on 3rd day. Relieved by nasal suction siphon. Temperature rising. Exploratory operation on 6th day. Peritoneal cavity normal. No fluid. No adhesions. Peritoneum normal. Large retroperitoneal abscess opened and drained.	Aug. 10 Aug. 16 1933	Aug. 18. Ileus and toxemia.
XII Age 60.	Acute abdominal pain with distension and obstipation 48 hours before admission. Suggestive of obstruction. No fever.	Appendix low in pelvis, gangrenous and perforated. Lower half of abdomen full of thin purulent fluid.	Midline incision. Appendix removed. Pus aspirated. Peritoneum closed. Complete suppression of urine from time of operation. Severe vomiting with disruption of wound on 4th day. Peritoneum found normal. No pus present.	Sept. 17 1932	Sept. 24. Uremia.

CASE IV—Hopelessly toxic Death probably inevitable with or without operation and with or without drainage

CASE V—This case illustrates an important point With wide exposure of retroperitoneal tissues to infection, free drainage is imperative A correct diagnosis with McBurney incision left wide open would give much better prognosis Strikingly wound drainage is rarely effective where real drainage is required Also with McBurney incision appendix could be removed

CASES VI AND VII—Same as Case IV

CASE VIII—Autopsy proved absence of peritonitis Mesenteric thrombi, involving large areas of bowel from cecum to jejunum, constituted a complication unavoidable and incurable

CASE IX—Same comment as on Case V

CASE X—Peritonitis apparently subsided without drainage Sudden emptying of uterus, always serious, was fatal in this case

CASE XI—This patient should have been drained While the peritonitis was completely cured by removal of the appendix and closure without drainage the retroperitoneal abscess, discovered with difficulty even at second operation resulted in ileus, to which treatment was directed Location under root of mesentery perhaps a factor in neurogenic paralysis? This is the only case in which we have regretted the omission of a drain

CASE XII—Despite widespread peritonitis, secondary operation for disruption of wound revealed a normal peritoneum four days after removal of appendix and closure without drainage Urinary suppression commencing at time of operation could not be related to question of drainage

Since appendicitis is the greatest single cause of peritonitis a description of our technic in appendicectomy may be justified as illustrating the principles of treatment in all types of peritonitis

INCISION

The importance of this step is often underestimated The right rectus incision may be necessary for examination of the gallbladder, stomach, and pelvic organs, but acute appendicitis does not justify a roving commission Furthermore a positive diagnosis of acute appendicitis should be possible in most cases, and the first consideration should be direct approach rather than exploration The McBurney incision gives the most direct access to the appendix with minimum exposure of the peritoneum In seven of our twelve fatal cases the appendix was found at the outer side of the cecum or entirely in the retrocecal space These appendices cannot be reached through a rectus incision except at the cost of forcible retraction and harmful packing of the intestines

On the contrary with a McBurney in-

cision a walled off abscess in this location can often be opened, the appendix removed and the wound closed without invading the general peritoneal cavity at all If the abscess is retrocecal or if profuse oozing of blood precludes closure, the best possible drainage is permitted by leaving the wound wide open By a McBurney incision we do not mean the button-hole type of opening, but a skin incision approximately four inches long Mont R Reid⁹ in a recent article states that a study of over 2,000 cases of acute appendicitis operated at the Cincinnati General Hospital shows that there has been a decrease of 50.3 per cent in the mortality rate since the operative procedure was changed from a rectus to a McBurney incision

If unexpected complications require more exposure the McBurney incision is easily extended in any direction to give access to any pathology in the right half of the abdomen In a recent case of acute appendicitis we found that the primary obstruction of the appendix was caused by a carcinoma at the junction of the appendix and cecum By extending the outer end of the incision upward and the inner end downward, we had an excellent exposure for the radical removal of the cecum, ascending colon, and proximal portion of the transverse colon The peritoneal vaccination furnished by the acutely inflamed appendix was the best possible insurance against peritonitis and we unhesitatingly closed without drainage

REMOVAL OF APPENDIX

If the appendix is free it is removed by the simplest possible method After ligation of the mesoappendix the stump is doubly ligated with chromic gut, divided and sterilized with the cautery and dropped back into the abdomen The wound is closed without drainage unless the appendix is grossly gangrenous, when the superficial wound is drained

The stump is never crushed because there is no reason for devitalizing it A purse-string suture is not only useless but potentially harmful because always infected It is never employed unless infection of the base of the appendix or the adjacent cecal wall constitutes a danger of fistula Adhesions do not form on a ligated dead stump but they are invited by an infected suture in the wall of the bowel

If adhesions surrounding the appendix render it difficult to expose the tip, the

base is found by following the longitudinal band and the base is ligated and divided between the ligature and a clamp. By retrograde dissection such an appendix can often be removed without disturbing the adhesions or breaking through the protecting wall.

Retrocecal appendices are best exposed and delivered by incising the outer leaf of the mesocecum and rolling the cecum inward.

DRAINAGE

We cannot too strongly emphasize the vital importance of understanding when drainage is necessary. Indiscriminate omission of drains would only add to the tragedies of appendicitis already so prevalent in this country.

Whenever infection of retroperitoneal tissue occurs, either from perforation or from a gangrenous appendix, wide-open drainage is essential.

In the presence of diffuse peritonitis, with purulent fluid seeping into view between non-adherent loops of bowel, removal of the appendix and closure of the peritoneum without drainage is indicated. In such cases, suction with a Pool suction tube should be used to remove as much as possible of the infected fluid. The muscles may be loosely closed, but the skin and subcutaneous tissues are better left wide open and packed with B. I. P. gauze, which is not disturbed for four days. When it is removed the wound is usually clean and may be closed. If the aponeurosis is gray and necrotic, a wet pack of Dakin's solution or Eusol, changed frequently, should be used.

Between these two extremes is found the large number of cases where surgical judgment is so important. Take for example a patient in whom the opening of the peritoneum is followed by a flow of pus either thick and "laudable" or thin, stinking, and deadly. The appendix may be perforated or merely gangrenous. The pus may occupy a small cavity surrounding the appendix with walls formed by fresh agglutinating adhesions, or it may fill the right side of the abdomen or the pelvis. Usually there will be extensive deposits of fibrin. What is the proper procedure?

With utmost gentleness the appendix is sought and removed. No packs are used, but a few moist gauze sponges may be necessary to hold back intruding loops of bowel. The pus is aspirated. If the

peritoneum is smooth everywhere and there is no bleeding, the peritoneum should be closed. If hemostasis is not complete or if any part of the abscess wall appears gray, shaggy, or necrotic, a soft cigarette drain should be inserted, or the cavity if small should be loosely packed with gauze. The peritoneum and muscles must not be sutured tightly about the drain. After twenty-four to forty-eight hours, the drain should be partly withdrawn or entirely removed, because at that time it is acting merely as a cork.

Advocates of the Ocshner treatment argue that it is bad practice to operate after peritonitis begins and before the infection is walled off because of the danger of spreading the infection. On the contrary, the early removal of a ruptured appendix is the surest way to stop the spread of peritonitis. Buchbinder¹⁰ referring to the experiments described above says:

I believe that what I was able to demonstrate in this series of cases was the importance of invading the peritoneum in the presence of spreading peritonitis when the removal of a septic process was possible. I believe furthermore that this series demonstrated not only the inefficacy of drains . . . but also the danger, since control animals . . . in whom drains were inserted, almost uniformly died. Autopsies on the latter group indicated that the drains produced a further spread of the infection.

Adhesions are permanent only when formed around a foreign body or around a focus of infection which is not removed before the fibrin becomes organized. With early removal of the source of infection and in the absence of drains fibrinous adhesions usually disappear completely in four or five days.

The limits of this paper forbid a discussion of other types of peritonitis. It suffices to say that few if any infections are more virulent than those from a perforated appendix. We have closed without drainage forty-eight consecutive cases of acute salpingitis or tubo-ovarian abscess with no deaths and no serious complications.

SUMMARY

1. It has been shown to be impossible to drain the general peritoneal cavity by any means whatsoever.

2. In the absence of catharsis infection rarely reaches all parts of the peritoneum before being walled off. Truly generalized peritonitis is comparatively rare and usually fatal. (Cf. Buchbinder.¹¹)

3 Death from peritonitis *per se* without operation is almost always death from overwhelming toxæmia. Intestinal paralysis and stasis are not important factors. On the contrary after operation with drainage ilcus is probably the most frequent cause of death. (Cf Steinberg¹²)

4 In all types of peritonitis except tuberculosis, early removal of the source of infection should be and usually can be effected.

5 Purulent and badly contaminated fluid exudates should be removed, preferably with a Pool suction tube, to lessen absorption.

6 The subperitoneal tissues are no more resistant to infection than are connective tissues elsewhere. Endothelium must be preserved by avoidance of rough sponging and dry packs.

7 Drainage is necessary in (a) Retroperitoneal infections, (b) localized abscess with doubtful integrity of the peritoneal lining, (c) peritonitis with uncontrollable oozing of blood.

8 The more widespread the peritonitis the less the indication for drains.

9 The skin incision should be left wide open and loosely packed with B I P gauze until subcutaneous fat and fascia appear clean. If muscles are sutured, interrupted sutures loosely tied should be used with drain to preperitoneal space.

10 Fever after forty-eight hours is usually due to infection of the abdominal wall. If an intra-abdominal residual abscess forms it should be allowed to localize and become palpable before being drained.

11 It is demonstrated that non-drainage reduces the danger of postoperative obstruction, perforations and adhesions. It gives a lower mortality, lessens suffering and shortens convalescence.

REFERENCES

- 1 Yates J L. An Experimental Study of the Local Effect of Intestinal Drainage. *Surg Gyn & Obst* 1473 1905
- 2 Hertzler A E. *The Peritoneum*. The C V Mosby Co, St Louis 1919
- 3 Gray, Sir Henry M W. Some Problems of Drainage. *Surg Gyn & Obst* August 1924, 221-228
- 4 Shipley A M and Bailey H A. Treatment of Appendicitis Complicated by Peritonitis. *Annals of Surg* 63 96 537
- 5 Marchini I. Abolition of Drainage in Circumscribed and Diffuse Peritonitis Especially from Appendicitis. *Surg Gyn & Obst* 53 330 (Abstract)
- 6 Mensing E H. Peritonitis Pathology Involved in Treatment. *Am Jour of Surg* 22 478 1933
- 7 Dixon C F and Rixford F L. Cytologic Response to Peritoneal Irritation in Man. *Am Jour of Surg* 25 504 1934
- 8 Buchlinier, J R. Droegmüller W A and Heilman F R. Experimental Peritonitis III. The Effect of Drainage upon Experimental Diffuse Peritonitis. *Surg Gyn & Obst* 53 726
- 9 Reid M R. Some Remarks on the Operative Procedures for Appendicitis. *Surg Gyn & Obst* 59 529 1934
- 10 Buchlinier, J R. Personal Communication
- 11 Buchlinier J R. Surgical Imitation in the Treatment of Acute Suppurative Peritonitis. *Surg, Gyn & Obst* 59 485, 1934
- 12 Steinberg B. Cause of Death in Acute Diffuse Peritonitis. *Arch Surg* 23 145 1931

*LOCAL BOY MAKES GOOD IN A BIG WAY

This traditional headline of the country paper seems to apply to a son of up state New York. He is Dr Sylvester Maxwell Lambert, of Ellenville, who now has a practice of some 1,000,000 patients in 8,000,000 square miles of sea and land in the Pacific Ocean. As related in the *American Magazine*, he is director of the medical work of the Rockefeller Foundation in the islands of the Pacific Ocean—a roving commission with a variety of duties. Treatment by internal medicine and injections, of hookworm and yaws, two of the worst scourges of the tropics, comes first. Then he teaches the principles of hygiene and sanitation to the natives and assists the various island governments to co-ordinate their medical departments into one service.

Dr Lambert reports that the natives of the Pacific islands formerly reported dying out are now increasing. He said to Mr John W Van dercook, writer of the article.

Hookworm happens to be easily curable. It didn't used to be. In 1921 Dr Maurice C Hall, zoölogist of the Bureau of Animal Industry of the United States Department of Agriculture

found that a small dose of carbon tetrachloride, one of the cheapest, simplest things on earth (dry cleaners use it instead of gasoline), would clean out, at once, 90 per cent of a patient's hookworm parasites.

'Having something like that to peddle believe me makes travel easy. The work of the Foundation and the government—this health business is done on a partnership basis of course—did more to civilize Malaita I think than all the missionaries and punitive expeditions of fifty years.'

'I suppose you don't care a darn about the Native Medical School! But it's more important than all this stuff put together. It's the first of its kind in the world—a school where natives receive a full course in modern medicine so they can go back and teach their own people. It's located here in Suva.'

All the students are Pacific Island natives. Forty students are enrolled. In exchange for their tuition they must serve their own people. It's a tough job we're giving them—to apply modern medicine in some cases to people just emerging from the stone age. But these boys can do it.'

OBSERVATIONS ON SOME DISTURBANCES OF THE
VESTIBULAR FUNCTION

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The sufferer from vertigo has an apprehension and foreboding, not comparable to that caused by any other symptom. To him both the sun and earth do move. This sensation of motion not true to fact that we term vertigo, is the most distressing of the symptoms resulting from disturbances of the vestibular function. The accompanying nystagmus, and disequilibrium are usually proportionate in degree to the vertigo if the cause be located in the peripheral vestibular system—the eighth nerve or inner ear. Menière's disease is a very popular diagnosis in patients having vertigo, tinnitus, and impaired hearing. The possible exception here may be when these symptoms either are associated with a purulent ear infection or when they are post-traumatic. Although Menière was the first to relate the well-known group of symptoms producible by a lesion of the peripheral vestibular system, it is merely a syndrome and does not represent a disease entity. In fact, Menière's autopsy report on his patient leaves its reader in doubt as to whether the ear pathology present was from a hemorrhage or a labyrinthitis. It was probably the latter. Menière's syndrome, as has been suggested by others, is a more appropriate terminology because this group of symptoms may result from any one of several pathologic processes affecting the ear or eighth nerve. Impaired hearing, tinnitus, and vertigo, which represent both impaired cochlear and vestibular function, vary in their intensity not only with the amount of the loss of function but also in respect to the onset and course, whether a sudden ablation of function, a recurrent interference, or a slowly progressive loss is the case. For example: In a patient suffering from a fracture of the inner ear, the acute symptoms will be marked vertigo, with nausea and vomiting and falling to the side of the injured ear, nystagmus (quick component) to the side of the normal ear, and total loss of hearing on the injured side. When there is a recurrent interference of function—as may

be seen in toxic disturbances of the labyrinth—the patient has attacks of vertigo of a slight to a severe degree, with intervals of comparative well-being. Tinnitus and impairment of hearing may be present in such cases. In a slowly progressive loss of eighth nerve function, such as may be produced by an acoustic neuroma, compensation for the vestibular loss usually keeps pace, and there may be very slight or no vertigo. Unilateral tinnitus and deafness are the more prominent symptoms in this type of case. Although Menière's syndrome, along with the findings on examination of impaired cochlear and vestibular function, signifies a peripheral disturbance—inner ear or eighth nerve intracranially—a correlation of the history, findings on testing, and neurological examination may be necessary to determine whether or not the primary pathologic process is peripheral or central, since one may be a complication of the other. As may be found on functional ear examination, signs pointing to a central lesion in the presence of a purulent middle ear infection or an acoustic neuroma, or on the other hand, a cerebellar tumor may involve the eighth nerve resulting in signs indicating a peripheral disturbance.

It should be noted here that a bilateral loss of vestibular function of an equal degree does not cause symptoms representing the sum of the two unilateral losses but rather an entirely different symptomatology from that of a unilateral loss. There is no vertigo and no nystagmus. Inability to maintain correct station and gait will be found which is more pronounced either on abolishing the aid of vision in maintaining equilibrium or certain afferent sensations when in the stable mediums of air or water. The disequilibratory disturbance here is permanent. Bilateral total loss of eighth nerve function is more usually seen in children as a complication of meningococcus meningitis and in adults due to syphilis. The otologist is in a position to render a very helpful service in the case

of children with deafness following meningitis. It is usually impossible to determine solely by cochlear tests, whether or not there is any hearing present in these young patients. On the other hand, if the vestibular tests be used and show a complete loss of function, the cochlear function is almost certainly lost. The futility of any treatment directed toward restoring the hearing should be told to the parents and they should be advised as to the proper schooling so that the afflicted one may have a chance for social adjustment.

When the vestibular system is involved centrally, there is no definite group of symptoms comparable to that of Meniere's syndrome found in peripheral disturbances, on which to depend for aid in diagnosis. In central lesions of the vestibular system therefore, the examination becomes merely a determination of the functional reactivity of the eighth nerve to the tests, and the findings must be correlated with those of the general neurological investigation of the patient.

Certain variations of the eye movements from the normal which may be either spontaneous or reactions brought out in the tests are dependable manifestations of a central vestibular disturbance, whereas the vertigo present and the degree and type of past pointing and falling may be only confirmatory evidence of the results of the general neurological findings that indicated a brain lesion. A spontaneous nystagmus other than a horizontal-rotary type is almost invariably of central origin, if a small group that are found in eye disorders are excluded. Even when the nystagmus is horizontal rotary in type and the direction (quick component) is to the side of a known ear lesion, it is usually of central origin. The usual description of nystagmus in a labyrinthitis, namely, that the direction of the nystagmus is first to the side of the infected ear, caused by irritation, and later to the opposite side when the labyrinthitis is fully developed, has not been my observation. I have never seen a nystagmus, present in the primary position of the eyes, with its direction to the side of an uncomplicated ear infection, and only once to the side of an ear injury. In this case, there was a basal fracture involving the ear and, of course, the nystagmus may not have been caused by the ear lesion. If on rotation or caloric tests, a nystagmus is induced that varies qualitatively with the normal type of re-

sponse, a central disturbance is definitely the cause. These qualitative variations may be either a perverted or an inverted type of nystagmus, either dissociated eye movements or a conjugate deviation of the eyes. I am of the opinion that these abnormal reactions, result from some interference in the vestibulo-ocular pathways, from the vestibular nuclei to the motor oculi nuclei inclusive. This disturbance of the vestibulo-ocular reflex may be due to a lesion which primarily involves that area of the brain or secondarily from pressure produced by an expanding lesion in some other brain region. As to conjugate eye movements, that is, the slow component of the nystagmus being present and the quick component absent on vestibular tests, neither clinical nor experimental observations have provided conclusive proof of the cause other than that there is a central lesion involving the vestibulo-ocular pathways. I have seen conjugate eye movements occur on vestibular tests, away from the side of a brain stem lesion and, also, to the same side of a cerebral tumor. In the Department of Neuropathology, New York Psychiatric Institute, Doctor Barrera and I are at present carrying out some investigations on the vestibular mechanism in the monkey which we hope will provide some information on the quick component of nystagmus.

The degree of vertigo induced by the tests will vary considerably in normal persons and the past pointing is usually proportionate to the vertigo. Although a wide latitude is allowed for the normal limits, at times certain inconsistencies in the vertigo and past pointing will be present that at the least are confirmatory of pathology of the central nervous system. It has been reported by many authors, and my observations confirm theirs, that in the presence of an expanding lesion of the posterior fossa the patient has very little or no vertigo and past pointing on vestibular testing. Normal persons may likewise be quite tolerant in this respect. The greatest usefulness, therefore, of this observation, as an aid in diagnosis is when the neurological examination reveals signs of an expanding intracranial lesion without definite evidence of a supra- or subtentorial location. In such an event, if the patient develops marked vertigo with nausea and vomiting on testing, it is almost certain that the lesion is supratentorially located.

CASE I

Spontaneous Nystagmus No

Panting N

Vertigo No

Rotation Tests (10 times in 20 seconds)

To the Right
Amplitude Good Duration 21 sec.To the Left
Amplitude Good Duration 25 sec.

Caloric Tests 67°F

Right Ear

After 1 min. Face front

Amplitude Good

Face up

Amplitude Good

Left Ear

After 1 min. Face front

Amplitude Good

Face up

Amplitude Good

Right

(10 times in 10 seconds)

3 to R

4 to R

To the Left

4 to L

Touched

3 to R

4 to R

to

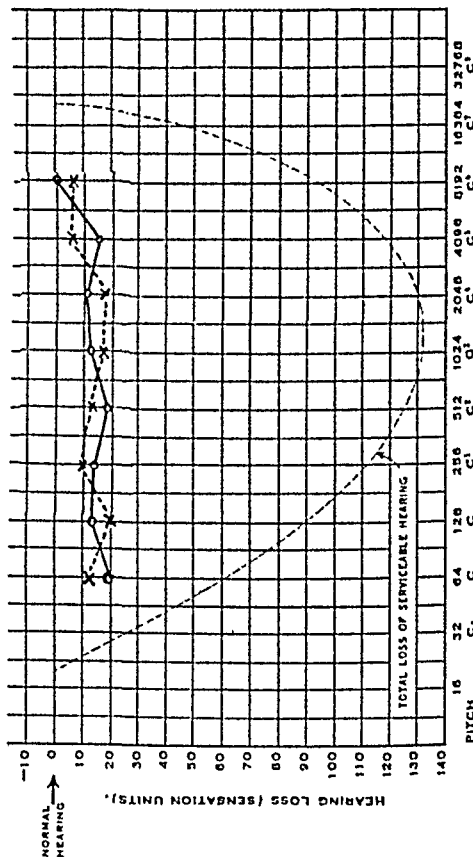
to

4 to L

3 to L

to

to

Less of hearing for speech R 10 per cent
L 12 per cent

CASE VII

Spontaneous Nystagmus R. Gaze Panting 75 R. Vertigo Yes

U. Gaze

Right

Left

(10 times in 10 seconds)

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

No to

Rotation Tests (10 times in 20 seconds)

To the Right

Amplitude Good Duration 25 sec.

To the Left

Amplitude Good Duration 23 sec.

Caloric Tests 67°F

Right Ear

After 50 sec. Face front

Amplitude Good

Face up

Amplitude Good

Left Ear

After 40 sec. Face front

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Amplitude Good

Face up

Cochlear Tests

5 ft. Whispered Voice 12 ft.

Conversational Voice

Weber

Audiogram

All forks heard

Right Ear

AC 7

BC 7

ABC

Left Ear

AC 14

BC 8

ABC

Nausea, Vomiting

Instead of attempting a more detailed report of the disturbances of the vestibular function, it seems more profitable to cite a few illustrative cases. In these case reports, there are recorded only the relevant facts in the history and examination of each patient. In most of the cases the functional examination charts are shown as the findings are more easily followed than if only given in the text.

CASE I.—Woman, age 25 years, admitted to Presbyterian Hospital with symptoms of a right acute mastoiditis; no complications. It was a recurrent ear infection. A polyp protruding through a perforation in the drum membrane was removed and instantly the patient suffered of marked vertigo, nausea, and vomiting. On examining her four hours later she was lying on the left side; that is, the diseased ear was upward, the most comfortable position to assume in such a vestibular disturbance. A horizontal-rotary nystagmus present was to her left side, and falling and past pointing was to her right. She could hear whispered voice in the right ear. The patient was too ill for a complete functional examination of the ears. The presence of hearing warranted the opinion that the patient had not developed a purulent labyrinthitis and that she should be observed, without having any operation at the present time. The vestibular symptoms subsided and ten days later, a simple mastoidectomy was performed. Two months later the cochlear and vestibular reactions were within normal limits. This chart is shown in order to demonstrate the procedure followed in the tests and the average findings in a normal case.

CASE VII.—Man, age 34 years. Dizzy attacks, deafness, and noises in the right ear for five weeks. Recurrent drainage from the right ear for ten years.

Vestibular reactions showed poor past pointing and a vertical nystagmus upward in the face-up position on caloric testing of the right ear. This qualitative variation in the nystagmus reaction indicates brain stem pathology, either as a direct involvement or through pressure. The hearing was slightly impaired on the right side. There was a small foul discharge coming from a marginal perforation in the attic region of the right ear. Roentgen ray examination of the mastoids showed the right to be sclerosed. A neurological examination at this time did not reveal any evidence of a focal lesion in the brain. Two days later, however, a neurological examination gave the impression of a right temporal lobe abscess. A lumbar puncture was done at this time. The spinal fluid was under pressure and the cell count was 50 lymphocytes. The patient died a few hours later, presumably from the result of the lumbar puncture. The evidence here suggests the presence of a brain abscess.

Menière's syndrome occurring along with a purulent middle ear infection usually indicates a pathologic process that requires an ear operation, especially when the ear infection is of long standing. Although otologists may not agree on the method of handling such cases, the opinion in a given

patient must be based on the inner ear condition as determined by the evaluation of the history, physical examination, and functional disturbances—spontaneous and that brought out on the cochlear and vestibular tests.

CASE III.—Man, age 38 years. He had spells of dizziness, with nausea and vomiting for nine months, and progressive loss of hearing and tinnitus in the right ear for fifteen years. There was no history of an ear infection.

Vestibular reactions to temperature were slightly impaired on the right side. Hearing was impaired in both ears, greater in the right; perception type. A general neurological investigation did not reveal any organic disease. Ears appeared to be normal. Tonsils were moderately injected. Adenoids, moderate size, were present, larger in the right Rosenmüller fossa. The right eustachian tube was slightly obstructed. His condition improved on inflations of the right ear. After tonsillectomy and adenoidectomy, he was relieved of the vertigo and his hearing improved.

It is not customary to get so much improvement of hearing in such patients as is noted here, even when the vestibular disturbance subsides.

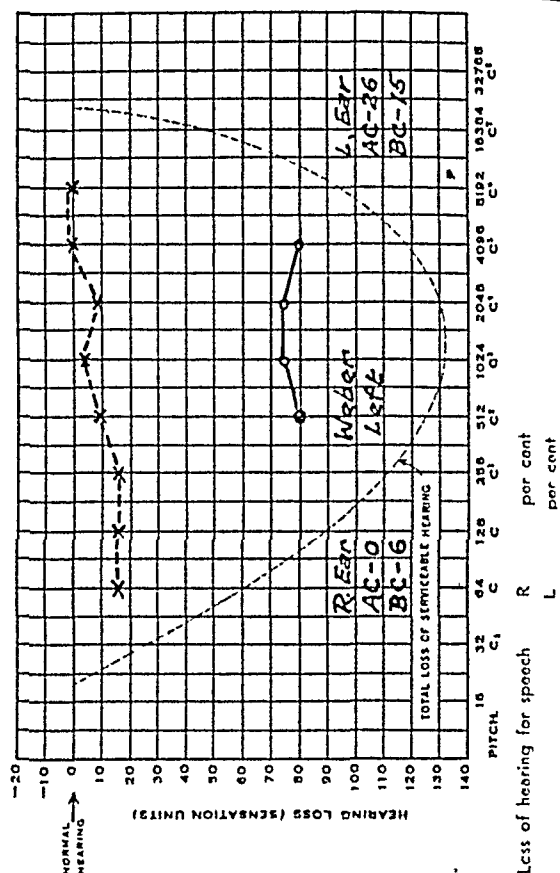
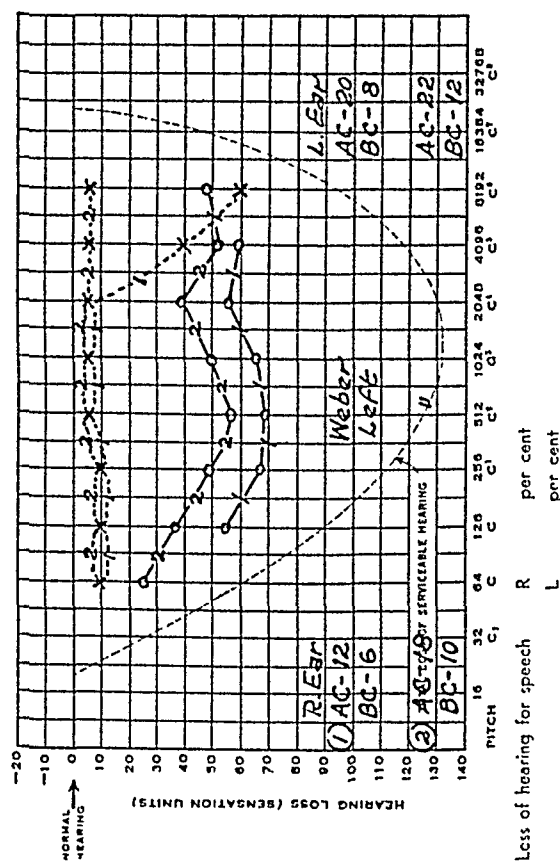
CASE IV.—P. H., 392,159, woman, age 25 years. She was admitted to Presbyterian Hospital a few hours following a severe head injury. Marked vertigo, nausea, and vomiting were her chief complaint. Examination showed a nystagmus to the left, blood in the right ear canal, and very good hearing for whispered voice. Although she had a basal fracture involving the ear, the good hearing present would assure one that the fracture did not include the inner ear, and that the prognosis for complete recovery of cochlear and vestibular function was good. Three months later the functional ear examination showed normal cochlear and vestibular reactions. The vertigo and nystagmus had subsided.

CASE VIII.—Woman, age 28 years. She complained of noises and impaired hearing in the right ear; giddy feeling at times with faulty gait. Her symptoms followed a head injury a year ago, in which she was unconscious for several hours. She had a basal fracture. There was no bleeding from the ears. Since the accident, this patient had received ear inflations. Tonsillectomy and adenoidectomy had been advised as treatment for the right ear deafness. The ears appeared to be normal.

Functional ear examination showed a total loss of vestibular and cochlear function. The history along with a total loss of vestibular function precludes, of course, any chance of restoring the hearing.

Cases IV and VIII illustrate that basal fractures involving the ear may or may not have bleeding in the external ear canal. Also, that irreparable loss of ear function may be present when there is no bleeding and, therefore, the bleeding from an ear in a head injury is not dependable as evidence of the extent of the damage and functional loss.

Spontaneous	Nystagmus	L. Gaze	Ponting	N	Vertigo	Slight
			Right	Left		
Rotation Tests (10 times in 20 seconds)			(10 times in 10 seconds)	to	to	
To the Right	→					
Amplitude/Fair Duration 15 sec.						
To the Left	←					
Amplitude/Fair Duration 10 sec.						
Caloric Tests 67° F.						
Right Ear						
After 5 min. Face front	None					
Amplitude						
Face up						
Amplitude						
Left Ear						
After 50 sec. Face front	None					
Amplitude Good						
Face up						
Amplitude Good						



CASE XI.—P. H., 78,598, woman, age 35 years, admitted to Presbyterian Hospital, with the complaint of dizziness with nausea and vomiting, deafness and "roaring" in the right ear. The onset was sudden, four days previously, at which time an ambulance surgeon was called and prescribed soda bicarbonate for the stomach upset. When I saw her she was lying on her left side, a horizontal-rotary nystagmus to the left was present and impairment of hearing to voice testing of the right ear. She was too uncomfortable to attempt a complete functional ear examination at this time. There was no history of an ear infection. Her ears, nose, and throat appeared to be normal. Vertigo became less and after two weeks she was able to carry on with very slight discomfort. The tinnitus and deafness remained as on admission. A functional ear examination, one month after the onset of the symptoms, showed a marked impairment of hearing in the right ear chiefly in the *lower tones* and a slight impairment of vestibular function on the right side. A recent functional examination, six months later, showed almost identical findings as noted above. However, there was no vertigo and only slight ear noises. During this patient's stay in the hospital, a complete investigation of her condition was carried out. Nothing additional to the history and findings related above was discovered to aid us in a diagnosis. The onset, course, and findings here suggest a vascular lesion of the right inner ear. A speculative diagnosis is: an occluding process of the division of the labyrinthine artery (Shambaugh) which supplies the upper portion of the cochlea and a part of the vestibular end organ.

CASE X.—N. I., 10,307, woman, age 30 years, admitted to the Neurological Institute complaining of tinnitus and loss of hearing in the right ear for three years. No vertigo at any time during the three years. She had been treated by four otologists. There was no history of a middle ear infection. She had received inflations of the eustachian tube, treatment for sinusitis, and electrotherapy. There had been no relief of her symptoms.

A neurological examination just prior to the functional ear examination recorded here, revealed evidence suggesting a right eighth nerve tumor. Hearing was greatly impaired in the right ear. Vestibular reactions were absent on the right side and impaired on the left. The cochlear and vestibular impairment here confirmed the diagnosis of an eighth nerve tumor. The examination of this patient illustrates the lack of dependability of the rotation tests in revealing unilateral vestibular loss in eighth nerve tumors.

A record of the audiometric test and rotation test which were done two and a half years ago was available and showed findings almost identical with those shown here. No caloric test was done at that time. It is a fair assumption that a caloric test on the initial examination, two and a half years ago, would have given evidence of sufficient vestibular impairment on the right side which along with the cochlear loss would have prompted a neurological investigation of this patient's condition.

We should bear in mind that the early subjective disturbances of eighth nerve tumors are almost invariably deafness,

tinnitus, and vertiginous attacks. The vertigo may be very slight or entirely absent as in this case. From the onset of symptoms, before other structures in the posterior fossa than the eighth nerve are involved to the extent of giving subjective symptoms, it may be a duration of years. The early manifestations of eighth nerve tumors suggest an ear disease to the sufferer. Relief is sought from the otologist as shown in the histories of all such patients examined by me. But rarely has the cause of the ear symptoms been suspected by the otologist until other neurological signs developed. It is believed that a complete functional ear examination should be done in all patients having a unilateral loss of hearing, and tinnitus, with or without vertigo, unless these symptoms can readily be accounted for by a middle ear disease. A total loss of vestibular function and a moderate loss of cochlear function on one side, along with a suggestive history, is sufficient evidence of the presence of an eighth nerve tumor to warrant a thorough neurological investigation of the patient's condition.

CASE IX.—P. H., 225,777, man, age 40 years. He had recurrent severe vertiginous attacks in which he would fall on the street. There was deafness in the left ear and the sound of "steam escaping." The ears appeared to be normal and there was no history of an ear infection. There was moderate impairment of vestibular and cochlear function, perception type, on the left side.

The general neurological investigation resulted in the opinion that this patient suffered from a left eighth nerve tumor. On operation a left cerebellar lobe tumor was found. There was not sufficient loss of cochlear and vestibular function in this patient to suggest an eighth nerve tumor. I have never seen a proven case of eighth nerve tumor in which any vestibular reaction was shown by the tests on the side of the lesion.

CASE XII.—Brain tumor, 74, B. H., man, age 47 years. Admitted to Bellevue Hospital complaining of frontal headaches, vomiting, and impaired vision.

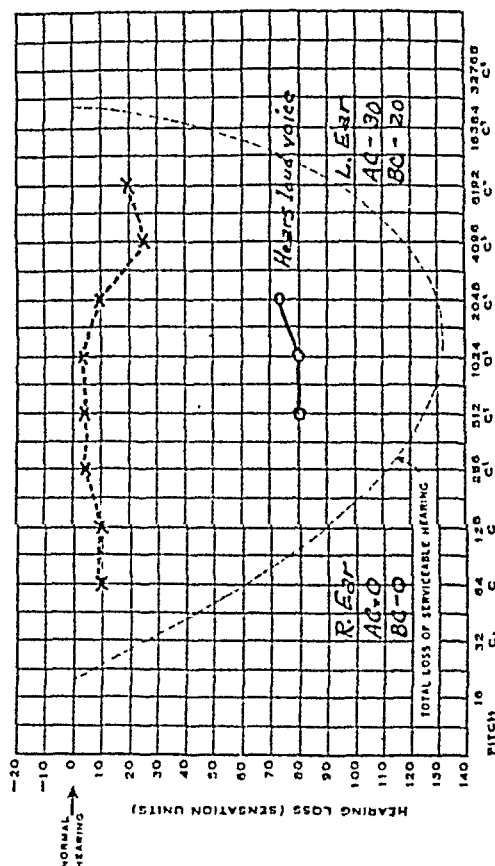
The neurological diagnosis was tumor in the right temporo-occipital area, deep. Autopsy findings confirmed this diagnosis. The hearing seemed to be normal in this patient. The vestibular reactions showed definite signs of a central lesion in any one of the following findings: conjugate deviation of the eyes, dissociated eye movements, and perverted nystagmus. The nausea and vomiting due to the testing was decidedly against a tumor in the posterior fossa. The conjugate deviation of the eyes to the right along with signs of a supratentorial tumor suggested a right cerebral tumor.

ABSTRACT OF DISCUSSION

DR. RICHARD M. BRICKNER, NEW YORK: While I am not competent to discuss Dr. North-

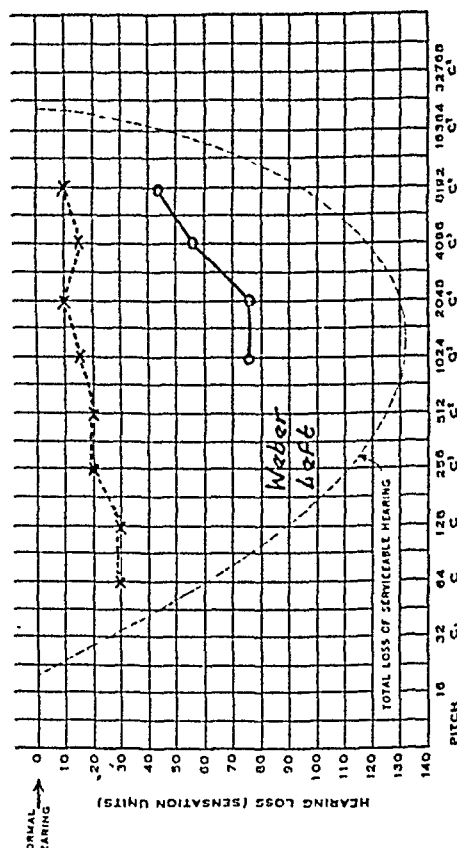
CASE X

Spontaneous	Mytasmus	Pointing N	Vertigo No
		Right	Left
Rotation Tests (10 times in 20 seconds) To the Right Amplitude <i>Fair</i> Duration 7 sec.	→	(10 times in 10 seconds) Touched	Vertigo 10 sec.
To the Left Amplitude <i>Fair</i> Duration 7 sec.	←	Touched	12 sec.
Caloric Tests, 67° F. Right Ear After 5 min. Face front Amplitude Face up	None	Touched	
Left Ear After 2 min. Face front Amplitude <i>Fair</i> Face up	None	Touched	
Amplitude <i>Fair</i>	←	Touched	



CASE XI

Spontaneous	Mytasmus	Pointing N	Vertigo Slight
		Right	Left
Rotation Tests (10 times in 20 seconds) To the Right Amplitude <i>Poor</i> Duration 17 sec.	→	(10 times in 10 seconds) 4 to R 6 to L	
To the Left Amplitude <i>Poor</i> Duration 17 sec.	←	6 to L 7 to L	
Caloric Tests, 67° F. Right Ear After 15 min. Face front Amplitude <i>Poor</i> Face up	None	4 to R 4 to L	
Left Ear After 1 min. Face front Amplitude <i>Fair</i> Face up	None	6 to L 6 to L	
Amplitude <i>Good</i>	←	to to	



ington's paper from the technical standpoint of an otologist, the author has emphasized a number of matters which are important from a neurological point of view.

The fact that "Menière's disease" is merely a syndrome and not a disease entity is especially vital to the neurologist. The term "Menière's disease" is one of a fairly large group which has probably led to unnecessary deaths, because of the strong tendency to consider that, when a name has been given to the patient's condition, the matter is closed. It is of primary importance to escape from the tendency to consider the question answered by giving it the name "Menière's disease." Only by doing so is it possible to isolate, from the mass of vertigos and tinnitus, those cases in which early removal of a cerebellopontine angle tumor may save the patient's life.

As Dr. Northington indicated, there are other forms of operable intracranial tumor which may produce vertigo, tinnitus, and deafness—those of the hemispheres of cerebellum, which compress the eighth nerve, and also cysts of the arachnoid in the cerebellopontine angle, the drainage of which may result in grateful relief. In addition, tumors of the cerebral hemispheres themselves are often associated with vestibular and cochlear symptoms. These may result from direct pressure upon the eighth nerve, a phenomenon which sometimes occurs when the tumor grows inward and downward from the medial side of the temporal lobe. But such symptoms need not necessarily depend upon direct pressure; some of them may be the result of the generalized increase in intracranial pressure, with a corollary blocking of the flow of endolymph in the structures of the internal ear. It is even possible that deformities of the brain stem, resulting from the stresses and strains of increased intracranial pressure, may produce these otologic symptoms, either by interference with the central pathways, or possibly through compression of the eighth nerve by the internal auditory and anterior inferior cerebellar arteries. It is also always to be remembered that the deafness may have some other, irrelevant, cause. In all of these situations, operation may result in cure, and it is of the utmost importance to avoid the dangers of casual diagnosis. No case of vertigo or tinnitus should be considered properly studied without a neurological examination. Similarly, no patient who has these symptoms, and who actually shows neurological changes, can be thought of as completely investigated unless rotation and especially caloric tests have been done. While the vestibular tests are not necessarily the final word in the study of the patient, they are often of great importance in helping us to determine what portion of the cranial cavity contains the tumor.

Probably their greatest usefulness in this particular respect lies in the exclusion of tumors of the eighth nerve. It is by no means rare to have a patient with a low-grade papilledema, whose chief symptoms are vertigo, tinnitus, and deafness, and who is thought of as having an acoustic neuroma. When tests show that the function of the vestibular nerve is relatively intact, it is, as Dr. Northington has pointed out, very definite evidence that the tumor is located elsewhere, probably supratentorially. At the Neurological Institute, considerable dependence is placed particularly upon this phase of the matter. Apropos of eighth nerve tumors, it should be emphasized

that bilaterality of involvement of the vestibular nerves does necessarily point against this diagnosis. In fact, such a tumor, if it grows to any size, is very likely to compress the brain stem sufficiently to produce changes in the vestibular and cochlear nuclei and central pathways, so that the impairment of the function must be bilateral. This is exemplified in Dr. Northington's tenth case. Incidentally, tumors of the eighth nerve do not, as is often thought, always produce facial paralysis. The facial nerve is peculiarly resistant to pressure, and there is frequently no disturbance in its function.

Another very important field in which the vestibular tests may be vitally important, is that of psychogenic disturbance. The differentiation between organic and psychogenic symptoms is admittedly one of the most difficult in medicine; this is particularly true in neurology, because there is no psychogenic symptom referable to the head which cannot also be produced organically. The fact that a neurotic personality affords the background for neurotic head symptoms may confuse the picture more than help it, because neurotics may, of course, also develop brain tumors. Among the most frequent psychogenic symptoms are vertigo and tinnitus. At the Neurological Institute, practically all patients with these symptoms are subjected to the vestibular tests, even when a psychoneurosis is the probable basis. When, under these circumstances, the tests show definitely normal vestibular function, the help obtained is of a very reassuring nature. When, as happens occasionally, Dr. Northington is able to demonstrate physical change in the vestibular pathways, the change in viewpoint may be life-saving.

Dr. Northington's Case IX, in which the impairment of the vestibular reactions was too small in degree to warrant the diagnosis of eighth nerve tumor, is of considerable interest. Though the history and neurological examination indicated the presence of such a tumor, the neoplasm was found in the left cerebellar hemisphere. This case illustrates the degree of accuracy which may be achieved by the vestibular tests. Such accuracy is of special importance in tumors of the posterior fossa, where the other great aid of neurology, encephalography, is dangerous.

DR. BASSERA: Dr. Northington mentioned the fact that he and I have been studying vestibular functions in monkeys at the Psychiatric Institute. We thought that it might be of interest to you if we occupied a few minutes of your time by telling you something about this investigation.

It has been our good fortune that Dr. Ferraro in his Department of Neuropathology at the New York State Psychiatric Institute and Hospital inaugurated some three years ago an intensive program of experimental investigation of the central nervous system in monkeys, a work which has been consistently supported and encouraged by Dr. Clarence Cheney, Director of the Institute.

Since the work was first started, Dr. Ferraro and I have operated upon, and studied, over 200 monkeys in which various experimental lesions of the central nervous system had been performed. The lesions were of all types, including partial and complete removal of the cortex, lesions of the midbrain, lesions of various portions of the dorsal-column system, and finally in what has formed the major portion of our work, lesions of the cerebellum in its various portions including isolated and combined sections of the various

CASE IX

Spontaneous Nystagmus ↑

Pointing N

Vertigo Attacks

Right . Left

Rotation Tests (10 times in 20 seconds)

To the Right

Amplitude 10 sec.

(10 times in 10 seconds)

8 to R

4 to R

To the Left

12 sec.

8 to L

12 to L

Amplitude 10 sec.

Caloric Tests

Right Ear

After 40 sec. Face front

Amplitude Good

Face up

Amplitude Good

Left Ear

After 2 min. Face front

Amplitude Good

Face up

Amplitude Good

CASE XII

Nystagmus 160

Pointing N

Vertigo 35

Right Left

(10 times in 10 seconds)

to to

to to

Rotation Tests (10 times in 20 seconds)

To the Right

Amplitude 10 sec.

Tendency to conjugate

Deviation to right, 10 sec.

To the Left

Amplitude 10 sec.

None, left eye.

Amplitude 10 sec.

Caloric Tests

Right Ear

After 2 min. Face front

Amplitude Fair

Face up

Amplitude Fair

Left Ear

After 4 min. Face front

Amplitude Good

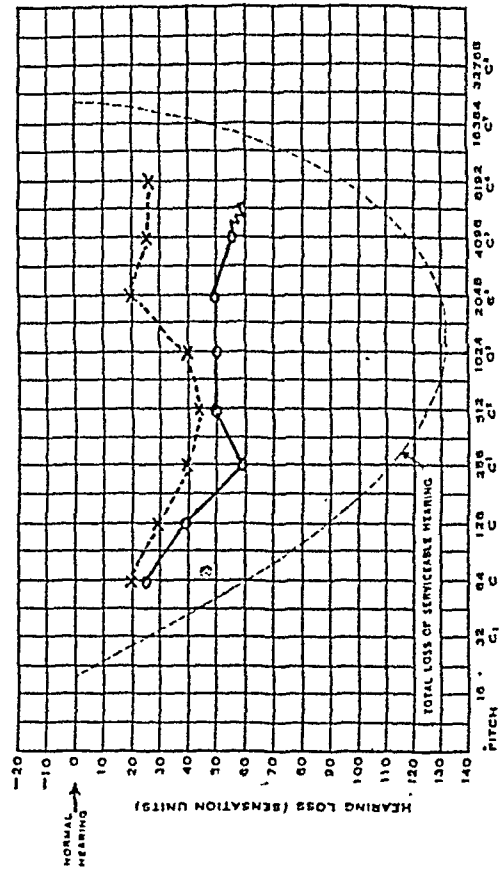
Face up

Amplitude Good

Nausea, Vomiting

NOTE: ← Indicates horizontal nystagmus, quick component to right.

Hearing appears to be normal in both ears to tuning forks.



Loss of hearing for speech R 40 per cent

peduncles and partial and complete removal of various portions of the cerebellum.

In addition, we have studied the effects of lesions of the central vestibular apparatus including the nuclei, the vestibulocerebellar and the

and I have studied the effects of lesions of the inner ear and of the eighth nerve. In all of these animals we have studied responses of the animal to the various vestibular tests including the rotation, caloric, and galvanic tests. We used a chart somewhat similar to that used in human cases. We have been particularly interested in the modification in the nystagmus responses associated with the various lesions, and in some of the grosser lesions we have been interested in the question as to the origin of the quick component. These results will all be tabulated against the histological findings as studied by Dr Ferraro and myself and should prove of decided interest. One of the major deficiencies in human clinical work has been, with rare exceptions, the absence of fine anatomical control to associate with clinical vestibular findings. This, we feel, will not be the case in our present series because each brain which has been subjected to an experimental lesion is studied completely in serial section so as to have a definite unequivocal tabulation of the exact structures involved in the lesion. This is one of the factors requiring so much time for the completion of the work. We feel, however, that the expenditure of time is well justified, as, when it is finished we expect to have systematic vestibular observations under controlled anatomical conditions of a large series of monkeys which we hope may lead us to a better understanding of the functioning of the various components affecting the nystagmus response originating in the various portions of the brain.

DR KARL GRUPP, *Utica*. The labyrinthine system, which I believe is admirably named, has so far foiled the attempts of neuro-anatomists to arrive at a complete understanding of its interconnections and hence the frequent lack of correlation of signs and pathology is not so surprising. Progress is being made, however, and new

concepts will be held. The work of Magnus, for instance, has assailed the old established conception of the quick nystagmus component being of cerebral origin and Ginkler of Chicago in his recent Textbook of Neurology accepts the vestibular rather than the cerebral origin of the quick component, or at least seriously questions the latter.

It is rather in central than peripheral disease that conflict occurs. The literature contains reports of many authors who claim that some definite localizing aid is to be derived from careful study of nystagmus but again these reports are usually terminated by listing exceptions. Gordon Holmes, however, did find fairly consistent eye signs in his excellent study of cerebellar war wounds.

My own conclusions based on discussions, observation and a study of case histories are as follows: (1) Atypical responses to stimulation indicate some central disturbance. (2) A coarse, floppy spontaneous nystagmus usually means disease somewhere in the cerebellum provided no eye disease is present. (3) Vertical nystagmus may indicate disease of the upper brain stem. (4) In nystagmus of central origin the point of fixation usually determines the direction of the quick component in contrast to the fixed direction of vestibular nystagmus. (5) The direction of falling in cerebellar disease is irregular in contrast to that of vestibular disease which definitely follows the position of the head. (6) Cases in which atypical vestibular signs and symptoms are present without other evidence of intracranial or ear disease may be on a toxic basis, in which connection I cite a case of yatrien poisoning used in treatment of colitis, during which one observer detected a vertical nystagmus.

Dr Northington's case histories are interesting. I think that his first case illustrates pretty well the dangers lurking behind each aural polyp, and that its removal by snare or forceps may usher in the last act. Case III with its clearing of vertigo and improvement of deafness following T and A was a revelation and I would like to ask Dr Northington if he considered the effect a mechanical one or rather removal of focus of infection.

INSTEAD OF NEW CANCER CURES

We should cease worrying about finding a new cure for cancer, remarks Dr J. Shelton Horsley, in the *Bulletin of the American Society for the Control of Cancer*, for the study of the biology of cancer appears to show that constitutional remedies or serums will probably never be effective. The important thing in the treatment of cancer is not to search for new cures, but to search for new methods of early diagnosis so that the efficient well known cures can be promptly applied. Unfortunately, except in the case of bone tumors, cancer does not cause pain in the early stages, so we shall have to fall back upon the teaching of the late Sir James MacKenzie, and emphasize the observation of disease

in its incipency and a careful and thorough study of what seem to be casual symptoms, as the indigestion, belching, heartburn in cancer of the stomach and bowel, the slightest irregularity in contour or substance of the breasts, or any unusual appearance on the skin or mucous membrane in any portion of the body. These signs or symptoms usually appear before the later symptoms of loss of weight, bleeding, ulceration or marked abnormal discharge. If we study more thoroughly things that appear to be casual and trivial in the beginning of the disease, and consequently make an earlier diagnosis, cured cases of cancer will increase enormously.

CHEMISTRY IN THE MEDICOLEGAL AUTOPSY

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Chemical methods when applied to autopsy material are extremely intricate; and at the same time great responsibility is involved. How phosphorus or strychnine is detected every chemist knows, but to isolate and detect 1/100 of a milligram (1/6000 of a grain) of strychnine present in 500 grams of tissue is an entirely different problem.

Much experience is necessary. The person to whom the chemical analysis is entrusted should be a chemist with years of experience in autopsy material—accurate, honest, and trustworthy; his integrity of the highest and indeed above the remotest suspicion, due to the fact that his findings may be the basis for the acquittal of the innocent or the conviction of the guilty.

The toxicological experience in the chief medical examiner's office in New York City is the largest in the world, not overlooking the medicolegal institutes of Germany, Austria, and France. Annually in this office there are analyzed over 2,000 human bodies. Since the inception in 1918 of the chief medical examiner's office in New York City, over 25,000 human bodies have been analyzed for poisons.

In the United States we have only two localities in which toxicological work is done as a routine, namely, New York City and Newark, New Jersey. In other cities and counties throughout the country no toxicological work is done as a routine. While writing this paper the author was called by long distance about a case that was troubling the authorities in a southern town. A man was driving along a country road in an open automobile. Witnesses saw the car swerve off the road and stop. The driver was found dead. The coroner, without any scientific investigation, signed it out as a carbon monoxide case. Doctors who had treated this man for the past few years claimed that they had advised him not to take this trip because of heart trouble. Instead of proving the presence or absence of carbon monoxide in the blood of the deceased by accurate chemical methods, the officials tried to argue the point whether the man had died of carbon

monoxide poisoning or of natural causes. Most of the cases throughout the country are malhandled in this way.

Cases appear that receive much notoriety in the newspapers. Then the officials seek the services of so-called experts. Upon investigation one can usually find that these so-called experts are but novices in toxicology. This condition exists throughout the country and it was the condition in New York City before 1918. The experts engaged in the Rice Case cost New York City \$30,000 for argumentative proof of whether Rice died from the effect of chloroform or not. No analysis for chloroform was made; it all depended upon which side produced the best argument. In the toxicological department of New York City a chloroform case of this kind would be completely solved in about two hours by a scientific chemical analysis. A rough estimate shows that the average cost to New York City for a complete toxicological examination, including grand jury and court testimony is \$5.00 per cadaver. In New York City to-day every case of accident, suicide, homicide, and most cases of sudden deaths with no medical attendants, are autopsied and chemically analyzed. A few of these cases will be described in order to point out the part played by toxicology in solving the cause of death.

1. ANALYSIS OF THE STOMACH CONTENTS THE MAIN, OR PERHAPS THE ONLY MARK OF IDENTIFICATION OF THE DECEASED. *The Becker Case.*—Becker, and his wife and two children lived in the Bronx, N. Y. Mrs. Becker suddenly disappeared. Letters mailed in Philadelphia to friends of Mrs. Becker stated that she was tired of living with her husband and therefore she had gone to Philadelphia, that she was well, and not to worry any further about her. Her friends, however, did not believe these letters. They knew, although she might have left her husband, that she loved her children too well to leave them behind. Mrs. Becker's friends therefore brought the matter to the attention of the District Attorney.

Investigation was started by the police. Mrs. Becker could not be found anywhere. After a few weeks of good detective work a clue was unearthed that Mrs. Becker had been buried in the yard behind a garage owned by a friend of Becker. The police proceeded to search for the body in this yard. After quite some digging, they found the body of a woman, completely covered with lye. The clothes, the face, and most of the external parts of the body were well chewed up by the lye so that it was impossible to identify the woman.

The body was autopsied and chemically analyzed. The head revealed that the woman's skull had been fractured by a blunt instrument. No poisons were found. The stomach contents revealed grapes, figs, and nuts.

Meanwhile the detectives sought the person who had last seen Mrs. Becker alive. They found this to be a woman friend of the Beckers. She stated that Becker and his wife visited her about 10 o'clock this particular evening. When asked what they had eaten at her home, she told them, without knowledge of the chemical findings, that she had given them grapes, figs, and nuts. It was mainly upon the finding of these particles of grapes, figs, and nuts in the stomach of the deceased, that the State succeeded in the identification of the body as that of Mrs. Becker.

The Beckers left the house of their friend about 11:30 P.M. They got into Becker's taxicab and started for home. On the way Becker feigned engine trouble and drove into aforesaid yard. He got out and lifted the hood. He called his wife to come out of the car and see for herself. As she stooped he hit her over the head with a blunt instrument knocking her unconscious. He then threw her into a previously dug hole, covered her with lye and buried her. He was tried, convicted, and paid the penalty.

2. A CAMOUFLAGED POISONING CASE.—

An automobile was found burning in an out-of-the-way country road. The owner, also in flames, was lying across the front mud guard, dead. A case of this description would have been signed out by most coroners as one where death was due to accidental burning. The medical examiner's office, however, investigated. An autopsy was performed, and a toxicological analysis was made. It was found by scientific methods of analysis that the man

had not died of the fire, fumes or smoke. He was dead when the fire reached him. Further analysis revealed large amounts of cyanide in all his organs. Death was due to cyanide poisoning.

The case was solved as follows: The man had suffered great financial losses. He was practically penniless. He had a family, and he wanted to provide for them. He had taken out a large insurance policy with double indemnity in case of accident. His intention was to commit suicide, and at the same time make it appear as an accidental death, in order to get the double indemnity.

He put the car on fire, and when it was burning well, he drank the solution of cyanide. He then threw the container of cyanide into nearby shrubbery and fell dead over the front mud guard. Thus a case which had the appearance of accidental death by fire was one of suicide by cyanide.

3. CASE THAT APPEARED TO BE SUICIDAL GAS POISONING WAS PROVEN TO BE MURDER BY SUFFOCATION. *The Freindlich Case.*—

Freindlich, wife, and three children, 9, 7, and 2 years old—lived in a New York East Side tenement. On the particular morning in question the father left the home about 7 A.M. About 7:30 A.M. one of the boys noticed the odor of gas. He ran into his mother's room and found her in bed. He shook her, but she did not respond. The boy called for help. The neighbors called the police who in turn notified the medical examiner's office. On arrival of the medical examiner he found the room filled with illuminating gas. The gas jet was open. The woman was dead in bed, lying on her back in a natural position. There was no pink coloration of the skin of her face, or any other part of her body (as is usual with carbon monoxide deaths). Lying in a crib a few yards away was the two-year-old baby, still alive. The baby was quickly removed to fresh air and saved. The absence of pink coloration of skin of the woman, and the fact that the baby was still alive and the mother dead, made the medical examiner suspicious, and an autopsy was performed.

The toxicological analysis of the blood removed from the heart of the deceased mother showed complete absence of any carbon monoxide. This indicated that death was not due to inhalation of illuminating gas. The autopsy further showed

that death was due to suffocation. Ten finger marks of compression were found on the back of her neck.

Freindlich murdered his wife for insurance money. He held her face against the pillow until she was dead. He then turned her on her back, straightened out all of the bed sheeting, turned on the gas and left the house. He was tried and convicted.

Coroners or inexperienced county physicians would most likely have signed the case out as suicide by inhaling gas, whereas it was murder by suffocation.

4. ALCOHOL THE CAUSE OF ACCIDENTS.—The toxicological laboratory of New York City analyzes the brain for alcohol quantitatively in all cases of fatal accidents, the purpose being to determine whether alcoholic intoxication was a contributory cause to the accident.

Research work on over 6,000 human brains and on spinal fluid and blood of living human alcoholics, and many series of experiments on dogs in which brains, blood, and spinal fluid were analyzed, proved that if the alcoholic content of the brain or of the spinal fluid reaches above 0.25 per cent it indicates that the individual was intoxicated. This was found to be true whether the individual was an abstainer or a habitue.

Case of Famous Air Pilot.—This flier was one of the first who successfully crossed the Atlantic. Several years later he took off at Roosevelt Field with two male companions. Within a few minutes the plane crashed to earth and all three were killed. Examination of the wrecked plane revealed nothing as to the cause of the accident. The deceased pilot was autopsied and toxicologically analyzed. The results of the analysis indicated that the pilot was intoxicated at the time he took off; and evidently this condition of intoxication was the contributory cause of the fatal accident.

5. PLANTED BODY FOR PURPOSE OF COLLECTING INSURANCE.—This is the story of two undertakers that were partners in their business, in a rural community. One of the undertakers took out a large life insurance policy, with double indemnity for

death due to accident, and he made his partner the beneficiary.

Not many months later a bungalow that they owned was burned to the ground. The burned body of a man was found in the ruins. The undertaker who was the beneficiary claimed that this body was that of his partner, and he put in his claim for the insurance, asking for double indemnity because it was an accidental burning to death.

The insurance company started an investigation. An autopsy and a toxicological investigation was conducted. The results of the investigation were as follows:

1. The external part of the body was completely charred. The head was completely burned off. The feet and part of one leg were burned off. No identification was possible.

2. By measurement of the bones of the extremities that were left, it was estimated that the deceased had been about two inches taller than the missing undertaker.

3. Some parts of the internal organs were still in good shape; that is they were not burned or boiled. Examination of the lungs showed a well developed pneumonia while the undertaker in question was seen apparently in perfect health only two hours before the fire.

4. Toxicological analysis revealed no poisons, ruling out suicide by poison.

5. Toxicological work further revealed that the body found in the ruins was dead when the fire started. The fire or fumes or smoke had nothing to do with this man's death.

6. The toxicological analysis also revealed the presence of formaldehyde in the various organs. This strongly indicated that the body had been embalmed.

The case was fully solved. The body found was not that of the undertaker. It was a man two inches taller who had died of pneumonia, and had been embalmed for burial. This body the undertakers planted in the house, and then set fire to the house.

The six cases above outlined illustrate the nature of the work the toxicological department of the Chief Medical Examiner's Office of New York City is doing.

CUTANEOUS REACTIONS TO HEMOLYTIC STREPTOCOCCUS NUCLEO- PROTEIN IN RHEUMATIC AND IN NON-RHEUMATIC CHILDREN

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For some years rheumatic disease has been associated with a streptococcus infection but lately more clinical, epidemiological, and bacteriological evidence of the causal relationship of this micro-organism has been put forward. Though there is no unanimity as to the type of streptococcus associated with rheumatic disease, the conception of acute rheumatism as a manifestation of, or sequel to, infection with the hemolytic streptococcus has received much support. A new approach to a study of this relationship has been offered by intracutaneous skin testing with the products of the various streptococci.

Within the last decade numerous workers have studied the relation of skin reactions to filtrates and extracts of streptococci to rheumatism. The first of these were done using filtrates of the toxin; subsequently a dried-ground extract of the organism, referred to as streptococcus nucleoprotein, was used. It is not our purpose here to review the literature, but to set down some of the previous results for comparison with the present investigation.

In 1927 using a filtrate from a non-methemoglobin forming streptococcus Birkhaug¹ performed intradermal tests on 54 rheumatic children and a larger number of controls with a dilution of 1/100. Of the rheumatics 76 per cent were positive; of the non-rheumatics 13 per cent. In 1928 Kaiser,² using a similar filtrate in the same dilution, obtained 72 per cent positive among 90 rheumatic children and 20 per cent among non-rheumatic controls. In 1928 Irvine Jones³ made filtrates from a variety of organisms. That obtained from a hemolytic streptococcus was diluted to 1/500 and injected intradermally. Seventy-five rheumatic children were tested. Of these 30.86 per cent were positive, while 20.3 per cent of the control non-rheumatic group were positive.

Swift, Wilson, and Todd⁴ used filtrates of several non-hemolytic types of streptococci. These were described as giving just as strong reactions with boiled filtrates.

They found a higher incidence of skin hypersensitivity to this preparation in rheumatics than in non-rheumatics. Collis, Sheldon, and Hill⁵ suggest that Swift's preparation contained a considerable amount of the nucleoprotein or extract of the organism as well as toxin.

In 1931 Derick and Fulton⁷ prepared dilutions of nucleoprotein from a hemolytic streptococcus. The test was done using .1 c.c. which contained .001 mgm. nitrogen. Of the rheumatics 88.6 per cent gave positive skin reactions; of the non-rheumatics 12.3 per cent were positive.

Coburn⁶ in 1931 performed intradermal skin tests using a similar method of preparation from hemolytic streptococci with various dilutions for skin testing, but most frequently a dilution in which .1 c.c. contained .001 mgm. nitrogen. 99 per cent of his active rheumatics were positive; 36 per cent of his controls. 95 per cent of his patients who had had recent streptococcus infections gave positive skin tests to this material.

Collis, Sheldon, and Hill⁸ more recently tested 256 rheumatic children during active and inactive stages of their disease. Their skin-testing material was prepared from packed and dried hemolytic streptococci ground in a ball mill for a shorter period than that prepared by Coburn and by Derick and Fulton. They called it a hemolytic streptococcus extract. Two dilutions were made; in the one .1 c.c. contained .00005 mgm. nitrogen, in the other .00002 mgm. They found that approximately 80 per cent of rheumatic children were positive in the active stage. This was reduced to about 40 per cent at the end of one year. Grouped all together 58 per cent of the rheumatics were strongly positive, 17 per cent weakly positive, and 25 per cent negative. Of the controls 28 per cent were strongly positive, 19 per cent weakly positive, and 53 per cent negative.

Gibson, Thomson, and Stewart¹¹ used a similar extract, in which .2 c.c. contained .00028 mgm. They found 76 per cent of

the rheumatics positive, and 55 per cent of the controls.

In general, the reported studies reveal a high percentage of the rheumatic individuals positive to the filtrate or nucleoprotein of the hemolytic streptococcus. The variability of the results may be explained by the work of Ando, *et al.*⁹ who were able to demonstrate two factors present in toxin produced by culturing the streptococcus of scarlet fever; one a heat labile fraction which is destroyed by heating to 80° for 30 minutes, the other a heat stable fraction which cannot be destroyed by boiling for an hour. The filtrates used in the above mentioned investigations on rheumatic patients probably contained these fractions in varying proportions, depending on how long they were cultured. (It has been shown that there is some of the heat stable element present in the toxin after only 48 hours' culturing.) So the patients tested with the filtrates were receiving both materials. One may have been negative to the heat labile while giving a positive reaction to the heat stable portion of the skin testing material; or the reverse may have been true.

The purpose of this study was to determine the cutaneous reaction to the heat stable fraction of a hemolytic streptococcus. It is referred to as a nucleoprotein in the United States and called (H. S. E.) Hemolytic Streptococcus Extract in England. Over 800 children were utilized for these tests. The group included 200 known rheumatic children; a number with other diseases such as scarlet fever, tonsillitis, and respiratory diseases. There were also children tested before tonsillectomy was performed.

METHOD

A 48-hour culture in Douglas Broth of a hemolytic streptococcus (strain Q-33 obtained from a rheumatic patient, culture kindly sent us by Dr. Homer Swift) is made. Organisms are then centrifuged and washed and heated to 60° for one-half hour. Then they are frozen and dehydrated. Then when perfectly dry they are ground in a ball mill for two weeks. The ground organisms are then dissolved in phenolized saline and the nitrogen content determined. Stock solutions are made containing 10 mg./100 c.c. These are diluted for skin testing to 1:100. .1 c.c. used intradermally, containing .0001 mg. nitrogen. The follow-

TABLE I.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN AT DIFFERENT AGES IN 835 CHILDREN

Age groups	Number tested	Number positive	Number negative	Per cent positive
Under 1 year.....	50	1	49	2.0
1-3 years.....	57	13	44	22.8
3-5 years.....	64	21	43	32.8
5-7 years.....	137	52	85	38.0
7-10 years.....	252	139	113	55.2
10-13 years.....	178	138	40	77.5
13-15 years.....	97	72	25	74.2
Totals.....	835	436	399	52.2

TABLE II.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN AT DIFFERENT AGES AND IN DIFFERENT DISEASES

Age group and reaction	Rheumatism	Tonsillitis	Scarlet fever	Other diseases	Totals
Under 1 year:					
No. tested.....	0	0	1	49	50
No. positive.....	0	0	0	1	1
No. negative.....	0	0	1	48	49
% positive.....	..	..	00	2	2
1-3 years:					
No. tested.....	4	9	2	42	57
No. positive.....	3	1	1	8	13
No. negative.....	1	8	1	34	44
% positive.....	75	11	50	19	23
3-5 years:					
No. tested.....	5	18	9	32	64
No. positive.....	4	3	5	9	21
No. negative.....	1	15	4	23	43
% positive.....	80	17	56	28	33
5-7 years:					
No. tested.....	26	45	4	62	137
No. positive.....	15	12	3	22	52
No. negative.....	11	33	1	40	85
% positive.....	58	27	75	35	38
7-10 years:					
No. tested.....	69	95	9	79	252
No. positive.....	50	47	9	33	139
No. negative.....	19	48	0	46	113
% positive.....	73	50	100	42	55
10-13 years:					
No. tested.....	58	55	3	62	178
No. positive.....	49	43	2	44	138
No. negative.....	9	12	1	18	40
% positive.....	85	78	67	71	78
13-15 years:					
No. tested.....	38	27	0	32	97
No. positive.....	28	21	0	23	72
No. negative.....	10	6	0	9	25
% positive.....	74	78	..	72	74
Totals:					
No. tested.....	200	249	28	358	835
No. positive.....	149	127	20	140	436
No. negative.....	51	122	8	218	399
% positive.....	75	51	71	39	52

TABLE III.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN IN 200 CHILDREN WITH DEFINITE RHEUMATIC INFECTION

Age groups	Number tested	Number positive	Number negative	Per cent positive
1-3 years.....	4	3	1	75.0
3-5 years.....	5	4	1	80.0
5-7 years.....	26	15	11	57.7
7-10 years.....	69	50	19	72.5
10-13 years.....	58	49	9	84.5
13-15 years.....	38	28	10	73.7
Totals.....	200	149	51	74.5

TABLE IV.—PFR CFNT POSITIVE REACTION IN RHEUMATISM, TONSILLITIS, AND SCARLET FEVER

Age groups	Rheumatism, per cent	Tonsillitis, per cent	Scarlet fever, per cent
1-3 years . . .	75	11	50
3-5 years . . .	80	17	56
5-7 years . . .	58	27	75
7-10 years . . .	73	50	100
10-13 years . . .	85	78	67
13-15 years . . .	74	78	.
Totals . . .	75	51	71

TABLE V.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN IN RHEUMATIC CHILDREN SHOWING RESPONSE IN ACTIVE AND INACTIVE DISEASE

Age group and reaction	Active rheumatic	Inactive rheumatic	Questionable rheumatic	Totals
1-3 years				
No. tested . . .	3	1	0	4
No positive . . .	2	1	0	3
No negative . . .	1	0	0	1
% positive . . .	67	100	..	75
3-5 years				
No. tested . . .	4	1	6	11
No positive . . .	3	1	3	7
No negative . . .	1	0	3	4
% positive . . .	75	100	50	64
5-7 years				
No. tested . . .	14	12	9	35
No positive . . .	11	4	3	18
No negative . . .	3	8	6	17
% positive . . .	79	33	33	51
7-10 years				
No. tested . . .	34	35	12	81
No positive . . .	28	22	6	56
No negative . . .	6	13	6	25
% positive . . .	82	63	50	69
10-13 years				
No. tested . . .	21	37	15	73
No positive . . .	20	29	11	60
No negative . . .	1	8	4	13
% positive . . .	95	78	73	82
13-15 years				
No. tested . . .	10	28	5	43
No positive . . .	10	18	4	32
No negative . . .	0	10	1	11
% positive . . .	100	64	80	74
Totals				
No. tested . . .	86	114	47	247
No positive . . .	74	75	21	176
No negative . . .	12	39	20	71
% positive . . .	86	66	57	71

TABLE VI.—DEGREE OF REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN IN 835 CHILDREN (in percentage)

Degree of reaction	Rheumatic cases		Questionable	Scarlet fever	Tonsillitis	Other diseases	Totals
	Active	Inactive					
—	8	25	30	21	32	59	38
±	6	10	13	7	13	8	10
++	22	36	23	40	33	20	27
+++	44	18	28	25	18	11	19
++++	20	11	6	7	4	2	6
	100	100	100	100	100	100	100

ing measurements were made in reading the degree of reaction:

0—.5 cms. = ±
 5—1 cms. = + (Read at 24 hours)
 1—2 cms = ++
 2— or greater = +++

Tabulation of the tests revealed a number of interesting facts. In a grouping of the children according to age rather than according to disease as noted in Table I, it is shown that there is an increasing susceptibility to a positive reaction after the first year of age up to 13 years of age, and then a slight decrease in the number of sensitive individuals. This observation agrees with the records of Collis⁸ (1932) which show that the age period from 12 to 14 was that of maximum sensitivity and that no increase in incidence of reaction was observed in higher age periods. It appears that infants under one year of age rarely show a positive skin reaction to streptococcus nucleoproteins whether they have a history of streptococcus infection or not.

In Table II the reactions have been grouped according to age and according to certain diseases. The reactions in rheumatic children at all ages show a high percentage of positive responses. The same may be said of patients with scarlet fever at all ages. In the group who had tonsillitis excluding those who also developed either rheumatism or scarlet fever, a much lower percentage of positive reactions was obtained except in the older children between 10 to 15 years. In the group of children with other diseases many of whom were candidates for tonsillectomy with no history of infection other than frequent head colds, there was the lowest percentage of positive reactions. After ten years of age many children show a positive skin test regardless of the type of infection, though the children with rheumatic infection are more susceptible to this nucleoprotein than any other group.

Skin testing with the nucleoprotein was undertaken in 200 rheumatic children. A definite clinical diagnosis of rheumatic infection was made in all of them. Relatively few rheumatic children were tested under five years of age but as indicated in Table III the percentage of positive reactions was high at all ages. Of the 200 different children tested 149 or 75 per cent showed a positive nucleoprotein test.

Tonsillitis is recognized as an initial infection in a large percentage of rheumatic children. It has even been considered by some authors as a rheumatic manifestation. It is at any rate looked upon as a streptococcus infection in many instances. Scarlet fever based on the accepted etiology of the disease is undoubtedly the result of a streptococcal infection. The result of the streptococcus nucleoprotein skin test was compared in the children with these three types of infection. Obviously all three clinical diseases existed in some of the individuals. In order to compare the skin response in the three classifications, the children listed in the tonsillitis group were not known to have had either rheumatism or scarlet fever. The children listed under the scarlet fever classification may have had tonsillitis but have not had any recognizable rheumatic manifestations.

As noted in Table IV, the children with rheumatic manifestations reacted positively in 75 per cent of the cases while those who had scarlet fever tested during the course of the disease, reacted positively in 71 per cent of the cases. Tonsillitis, on the other hand, which had existed a short time prior to the skin test or even years before elicited a positive response to the nucleoprotein in 51 per cent of the children. It appears that the clinical manifestations termed rheumatic disease and scarlet fever are more likely to show a positive response to the heat stable extract of the hemolytic streptococcus than other infections such as tonsillitis.

A more detailed analysis of the reactions in the 200 definite rheumatic children as well as in the 47 children listed as questionable rheumatics has been made in Table V. Among the 86 children with active rheumatic disease, 86 per cent gave a positive skin reaction, while among the 114 inactive active cases 66 per cent showed a positive reaction. Of the 47 questionable rheumatic children 57 per cent were positive to the nucleoprotein test. The active cases showed such rheumatic manifestations as chorea, arthritis, and pancarditis. A positive skin reaction to the intracutaneous injection of hemolytic streptococcus nucleoprotein was present in a majority of patients with definitely active rheumatic disease but became less positive as the acute attack subsided. Similar observations have been recorded by Coburn,⁹ Gibson,¹¹ on the other hand, reported in his series of tests

that the highest proportion of positive skin reactions to the extract of hemolytic streptococcus was found in cases of chorea; afebrile cases were less hypersensitive and febrile cases were least sensitive.

Perhaps of greater significance than the number of positive skin reactions among the rheumatic children is the degree of the reaction to the nucleoprotein. All the tests were noted according to the degree of the reaction and are recorded in Table VI. The marked reactions designated as +++ were noted mainly in the children with rheumatic infection. A few occurred among the children with scarlet fever and tonsillitis. But practically none were found among the 300 children with other diseases. The same applied to the somewhat weaker reaction designated ++. Among diseases other than rheumatic infection the positive reactions were likely to be slight, while among the rheumatic cases the positive reactions were generally more marked or severe.

When one compares the results of the skin tests in rheumatic disease with other diseases, the preponderance of the positive reactions in diseases associated with streptococcal infection is readily discernible. Table VII shows the high incidence of positive tests in rheumatic disease, scarlet fever and lessened incidence in tonsillitis, which may in many instances be a streptococcal infection. In such infections as the common cold and otitis media, positive reactions are less frequent, while in the pulmonary infections and in nephritis the majority of the tests are negative.

A group of 302 children of various ages was tested to determine the effect of tonsillectomy on the intracutaneous skin test. The percentage of positive reactions among these children was about the same as among any group of non-rheumatic children. Thirteen children were retested three months after the tonsillectomy was performed. Practically all of them showed the same reaction as before operation. Eleven of the same children were retested six months after the operation. All but four of these children still showed the same reaction. These four children showed + whereas six months ago they showed ++. Additional studies will be made on these children to determine the effect of tonsillectomy on skin susceptibility to the nucleoprotein of the hemolytic streptococcus.

DISCUSSION

Can any significance be attached to a positive skin test with the hemolytic streptococcus nucleoprotein? The question is immediately raised, "Will not the other nucleoproteins produce similar reactions?" In this study no control tests were made except in a few instances where a boiled preparation of the nucleoprotein was utilized. It was found that the degree

of the reaction was in no way changed by this procedure. Sufficient tests with other products had been made by competent observers. Coburn⁶ showed that 90 per cent of all individuals skin-tested with nucleoprotein of *B. typhosus* reacted positively. On the other hand these same individuals showed positive response to staphylococcus nucleoprotein in only 20 per cent, and to non-hemolytic streptococcus nucleoprotein in only 10 per cent of instances. Gibson¹¹ likewise had shown that reactions to viridans and gamma streptococcus extracts show no significant difference as between rheumatic and control series. In view of these and other similar observations, no control studies were made.

The hemolytic streptococcus nucleoprotein has been compared with old tuberculin and with Dick streptococcal toxin. A positive reaction to the injection of old tuberculin into the skin is now universally held to indicate that the patient is hypersensitive to tubercle bacilli or their products. This reaction is specific and is strictly related to tuberculosis. The streptococcal nucleoprotein skin tests likewise indicate that the patient is hypersensitive to some streptococci but it is not specific for rheumatic disease. The streptococcal skin test differs from the tuberculin test in that it may not remain positive as the tuberculin test does. The hemolytic streptococcus nucleoprotein is quite distinct from the Dick streptococcal toxin which can be destroyed by heat and is neutralizable by a specific antitoxin.

There seems to be considerable evidence to show that a positive skin test with the hemolytic streptococcus nucleoprotein has some significance in the rheumatic child. Its almost complete absence in infants under one year of age suggests that these infants have not yet become infected with a hemolytic streptococcus or have not yet become allergic to its products. With increasing age there is more liability to infection with the hemolytic streptococcus as is shown by a greater incidence of rheumatic infection, scarlet fever, and tonsillitis. Parallel with this increase of clinical infections due to the hemolytic streptococcus is an increase in the number of children who react positively to this nucleoprotein. The positive reactions however are decidedly more likely to occur in rheumatic infection and in scarlet fever than in other diseases. Inasmuch as 75 per cent of these

TABLE VII.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN IN CHILDREN WITH VARIOUS DISEASES

Diseases	Number tested	Number positive	Number negative	Per cent positive
Rheumatism	200	149	51	74.5
Scarlet fever during active infection	28	20	8	71.4
Scarlet fever 1 year or more since infection	58	34	24	58.6
Upper respiratory infection including tonsillitis	270	131	139	48.5
Other diseases not listed	201	84	117	41.8
Otitis media	33	11	22	33.3
Pneumonia	33	6	27	18.2
Nephritis	6	1	5	16.7
Bronchitis	6	0	6	0.0
Totals	835	436	399	52.2

TABLE VIII.—CUTANEOUS REACTION TO HEMOLYTIC STREPTOCOCCUS NUCLEOPROTEIN IN CHILDREN BEFORE AND AFTER TONSILLECTOMY

Patient	Age	Sex	1st test 10-16-33	2nd test 1-18-34	3rd test 4-19-34
J. A.	11	F	0	0	0
G. G.	7	F	0	+	+
G. G.	8	F	0	0	0
J. L.	10	F	++	++	+
G. P.	7	M.	++	++	+
F. P.	8	F	0	0	0
L. P.	6	F	0	0	0
J. R.	11	P.	++	++	++
G. S.	9	M	++	++	+
L. V.	8	M	++	++	+
J. Z.	10	M	+++	++	++
G. W.	5	M	0	0	Not done
J. E.	10	M	++	+++	Not done

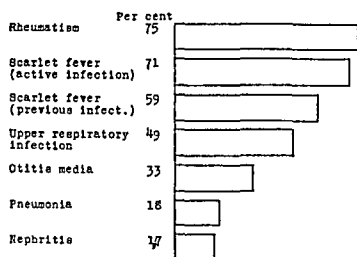


CHART I.—Per cent positive reaction to hemolytic streptococcus nucleoprotein in various diseases.

children show a positive reaction and only about one-half as many at the same ages who did not manifest clinical evidence of these diseases it would seem to indicate that these children with known streptococcal infections become allergic to the organism or its products. Undoubtedly many children who react positively to this nucleoprotein may have been infected with the hemolytic streptococcus but no history of clinical manifestations was noted. It seems therefore reasonable to assume that a positive reaction to this nucleoprotein indicates the child has been at some time infected with the hemolytic streptococcus.

It is interesting to note that in addition to a higher incidence of positive reactions in children with rheumatic disease the degree of reaction was also more marked in those children. The +++ reactions are almost entirely limited to rheumatic fever patients and to those with known streptococcal infections such as scarlet fever and in cases of tonsillitis showing a high percentage of hemolytic streptococcus in the throat. One rheumatic patient tested with .1 c.c. containing .0002 mg. nitrogen showed a positive reaction measuring 5-6 cms. in diameter, and causing involvement of the lymphatics up the arm. It subsided with vesicle formation. In erythema nodosum the results are striking. Collis¹² has shown that mild or negative reactions are produced with this nucleoprotein in cases which are due to tuberculous infection, while strong reactions occur if the infection is of rheumatic origin. Similar results were obtained in our studies. Any patient with erythema nodosum should be tested with old tuberculin and with the hemolytic streptococcus nucleoprotein. This test undoubtedly has considerable clinical significance in searching for the etiology of this disease.

Observations on scarlet fever patients showed a high percentage of positive skin tests during the disease. At first the skin tests were made on them at various times during their hospital stay of 30 days until it was realized that some were negative at first and later became positive. Four cases were skin-tested at repeated intervals during their illness and a progressively increasing reaction was found, beginning to be positive in the first or second week and reaching the maximum in the fourth week. This is in agreement with McGibbon's¹⁰

results reported recently, who found that 90 per cent of scarlet fever patients gave a positive reaction to hemolytic streptococcus nucleoprotein in the fourth week of the disease.

No clinical significance can be attached to positive skin tests in non-rheumatic children as noted in this study. Among the 300 children who were tested prior to their operation for removal of the tonsils it was found that the highest percentage of positive tests was found among those children who gave a history of attacks of tonsillitis. Retesting a small number of these children three and six months after tonsillectomy, a weaker reaction to the nucleoprotein in a number of them was found, while the majority of the tests remained the same. It is suggestive that tonsillectomy may have relieved the focus of infection in these children as noted by the declining skin response to the nucleoprotein. Additional tests and observations will be made on these children to determine if any relation exists between the result of the test and clinical infection. No deductions can be made from this study other than to note that the results are in accord with previous reports made by other observers. It at least supports the contention that rheumatic disease may be associated with a streptococcus infection.

SUMMARY

Intradermal skin tests were performed in 835 different children with a hemolytic streptococcus nucleoprotein.

Positive skin reactions to this nucleoprotein are seldom present in infants and are most common in children between 10 and 13 years of age.

Rheumatic children, 200 in all, gave positive reaction in 75 per cent, and non-rheumatic children in 32 per cent.

Other streptococcal infections such as scarlet fever and tonsillitis gave a higher percentage of positive reactions than other infections.

Practically all of the +++ reactions occurred in the rheumatic children.

16 N. GOODMAN ST.

REFERENCES

1. Birkhaug, K. E.: *Jour. Infect. Dis.*, 40: 549, 1927.
2. Kaiser, A. D.: *Jour. Infect. Dis.*, 42: 25, 1928.
3. Irvine-Jones, E. I. M.: *Arch. Int. Med.*, 42: 784, 1928.
4. Swift, H. F., Wilson, M. G., Todd, E. W.: *Amer. Jour. Dis. Child.*, 37: 98, 1929.

- 5 Mackenzie G M, and Hanger, F M *Jour Immunol*, 13 41, 1927
- 6 Coburn, A F *The Factor of Infection in the Rheumatic State*, London, 1931
- 7 Derrick C L, and Fulton, M N *Jour Clin Invest* 10 121, 1931
- 8 Collis W R F, Sheldon W, and Gray Hill, N *Quarterly J Med* (NS), 1 511, 1932
- 9 Ando K *Jour Immunol* 18 223 1930
- 10 McGibbon J P *Lancet* 225 1363, 1933
- 11 Gibson H J, Thomson W A R, and Stewart D *Arch Dis Child* 8 57, 1933
- 12 Collis W R F *Quarterly J Med* (NS), 1 141, 1932

DISCUSSION

S W CLAUSEN, Rochester, N Y—The analysis presented by Dr Kaiser and Dr Keith of the reaction of the skin of children to the intradermal injection of the nucleoprotein of a hemolytic streptococcus is of importance in two respects

(1) The results support the hypothesis that infection with streptococcus is present in rheumatic fever. Complete proof of the streptococcal etiology of rheumatic fever is still lacking. It is known that rheumatic fever rarely occurs in the South, where tonsillitis and puerperal sepsis due to streptococcus are also rare, it is also known that recurrence of rheumatic fever often takes place two or three weeks after an acute infection with streptococcus. Recently, however, Duckett Jones has stated that streptococci cannot be found in the throats of a certain number of rheumatic patients, also that the febrile disorder caused by intravenous injection of typhoid vaccine in a person with quiescent rheumatic fever may be

followed by the development of very marked symptoms of rheumatic fever. Dr Kaiser and Dr Keith imply that the nucleoprotein used in their work might be more specific than the nucleoprotein from other streptococci. It would of course be of great importance to discover whether rheumatic persons are especially sensitive to a particular streptococcus, or whether they are sensitive to a large group of streptococci. It may be found that the skin reaction to the various nucleoproteins does not differ as much as certain other biologic reactions e.g., reactions between serum and the specific carbohydrates of the various streptococci.

(2) This paper also shows that the response of the rheumatic person differs from that of non-rheumatic persons even when they are infected with streptococcus. A very much higher proportion of young rheumatic children have developed sensitivity of the skin to streptococcus nucleoprotein than have children of the same age with tonsillitis. Scarlet fever also confers this sensitivity upon the skin of the majority of young children, but the sensitivity of the skin appears to persist much longer in the rheumatic children than in any of the other children. It would be of interest to know whether this means that a subacute or chronic streptococcus infection persists in such children. If this is the case, the test might be of value as a guide in the treatment of supposed foci of infection. If, on the other hand the positive skin test means the persistence of allergy without the presence of infection it might be of value as a guide in desensitization or as an indication for the continued use of salicylates.

GLAND TREATMENT FOR CHILDLESSNESS

The cause of childlessness in a large number of marriages as well as the cause of progressive deafness in fully two thirds of cases examined has been traced directly to improper functioning of some of the glands of internal secretion the closing scientific sessions of the clinical congress of the American College of Surgeons was told by a specialist in the endocrine field, as reported in the *New York Times*.

This role of the glands, which have been found to play an important part in other vital functions, was reported by Dr Allan Winter Rowe, director of research at the Evans Memorial Hospital of Boston.

Of a hundred childless couples examined, Dr Rowe stated fully half were restored to normal by the daily administration of a few drops of hormone extract.

Most of the infertility was laid to malfunctioning of the thyroid gland in the throat, the pituitary gland at the base of the brain, and the ovarian gland. By supplying the particular deficiency the condition was removed, Dr Rowe reported.

Incidence of the condition was evenly divided between men and women, Dr Rowe added. Among the 100 couples examined sixty nine persons were childless because of a deficient pituitary, and of these half were men. In each of these cases the administration of pituitary extract brought the patient back to normal.

Twenty seven cases were traced to thyroid trouble and of these twenty one were men and only six women. In all, fifty six men and sixty-one women have been restored to normal by correcting the glandular abnormality.

In cases of progressive deafness known as otosclerosis Dr Rowe stated that fully two thirds of the cases examined by him could be traced to the malfunctioning of either the thyroid, pituitary or some other gland. In all of those cases the hearing was definitely improved by an artificial supply of the deficiency.

The examination of a large number of school children Dr Rowe reported also revealed that mental backwardness could be traced to glandular under functioning.

Louis J Auerbacher, the first to suggest that the Vitamin D irradiation of milk might be an effective means of curbing infantile rickets and the man who launched the successful experiments toward that end in association with the late Dr Alfred F Hess has been appointed Director of Medical Relations of the Borden Company.

Mr Auerbacher is vice president of the Dry Milk Company Inc, one of the affiliated organizations of the Borden Company. His new duties include contacting the medical profession regarding all phases of research on milk and milk products.

ARTERIOGRAPHY

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Reynaldo Dos Santos and his associates in their excellent work, *Arteriographie des Membres et de L'Aorte Abdominale*, published in 1931, gave the history of arteriography. It is stated that as early as 1896 observers in France, Italy, and Germany radiographed the peripheral circulation in the cadaver by the injection of radiopaque substances such as bismuth. As early as 1910 attempts were made to visualize the arteries in the living subject but the first practical work was really begun in 1924 by Sicard and Forestier using Lipiodol and by Berberich and Hirsch with a solution of strontium bromide and by the American Brooks using a solution of sodium iodide. Dos Santos and his co-workers began their work in 1929 using various radiopaque solutions. In this country in 1932 and 1933 E. V. Allen and J. D. Camp of the Mayo Clinic have done some excellent work along this line.

The arteries of the periphery can at times be visualized when sclerotic or when sufficiently calcified to cast a reasonably dense shadow. This type of visualization gives us very little information as to the size of the lumen, the flow of the bloodstream, and the extent of occlusion of the vessel lumen. This method does not visualize aneurysms or aneurysmal dilations.

In such diseases as diabetes with arteriosclerosis, endarteritis, and allied conditions it is often of greatest value to determine the exact condition of the vessels involved. The intra-arterial injection of some radiopaque solution is necessary for a direct study of the peripheral vascular system. The ideal solution for this purpose should be non-toxic, non-irritating, and readily excreted. Such a solution has as yet not been found. Various solutions of iodides, bromides, as well as solutions containing organic iodine such as skiodan, iopex, and the like, have been used. In the proper concentration for good visualization these solutions have been found painful and irritating to the lining of the arteries and not entirely free from toxic effects.

We have found the most satisfactory solution for this work, while not ideal, to

be best for our purpose at the present time. This is a solution of 25 per cent thorium dioxide and manufactured under the trade name of "Thorotrast." The solution is non-irritating and used in the amount ordinarily necessary for good arteriography, has been found to be non-toxic. The disadvantage of the solution lies in the fact that the thorium salt is picked up by the reticuloendothelial system and deposited in the liver and spleen. It is excreted extremely slowly but various investigators agree that it is apparently harmless in small amounts.

Arteriograms have been made of nearly all the main arteries in the living subject, such as the carotid, pulmonary, and the abdominal aorta. The procedures for injecting these large vessels necessitate a special technic and are not at present of much definite diagnostic value. The arteriography of the vessels of the extremities, however, is much simpler and has a very definite diagnostic value. The arterial state of the femoral is most frequently desired and the brachial in a few selected cases.

TECHNIC

The technic of arteriography at St. Johns Hospital is as follows: An ampoule of thorotrast of 12½ c.c. is diluted with normal saline to make a volume of 25 c.c. The artery selected is punctured under aseptic conditions with a number 18 gauge needle attached to a syringe containing the diluted thorotrast. In the case of the femoral this injection is made in the upper part of Scarpa's triangle. In the case of the upper extremity any point in the brachial, above the elbow, may be selected as the site of the injection. The solution is injected at the rate of 3 c.c. per second, and the radiograph is taken as the last 5 c.c. are being injected. It is essential that the x-ray exposure occur during the course of the latter part of the injection. The lower extremity is best taken in the lateral plane. The exposure time is ⅓ second. The distance is 48 inches with low kV voltage and 10 m.a. current.

It is of considerable advantage to have the entire arterial tree in the lower extremity from the point of injection to and including the foot on one x-ray negative. This can be obtained by the use of a special cassette 3 feet long and 8 inches wide.

In the upper extremity where a tourniquet or an inflatable cuff can be applied proximal to the point of injection the extremity may be taken in two planes at one injection. This is not possible in the lower extremity because of the high point of injection.



Fig. 3—Complete occlusion of the femoral artery due to sclerosis in midthigh with re-establishment of the vessel by collateral circulation



Fig. 4—Complete occlusion of femoral at the popliteal bifurcation in cases of diabetic gangrene of the foot

INTERPRETATION OF ARTERIOGRAMS

The interpretation of arteriograms requires special study. There are many possible technical and other errors which cause misinterpretation of the x-ray negative. Improper injection of contrast medium, insufficient quantity to completely fill the vessels, and improper taking of the radiographic exposure are some of the possible



Fig. 1—Normal arteriogram of the lower extremity

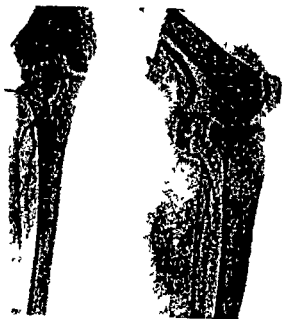


Fig. 2—Popliteal aneurysm containing a large thrombus with gangrene of foot and leg.

sources of error. Spasm of the vessel wall may give an entirely wrong impression and if it is found to exist it may be eliminated by a low spinal anesthetic to block out the sympathetic influence. This spasm is liable to occur particularly in thrombo angiitis obliterans.

The interpretation of the arteriogram will depend on such factors as: (1) Congenital anomalies; (2) changes in the vessel lumen from a very slight constriction to complete occlusion; (3) extent of collateral circulation at the point of occlusion; (4) presence of dilations or aneurysms.

The normal artery presents a smooth homogeneous outline. In thrombo angiitis obliterans the vessels are irregularly reduced in caliber. The process usually begins in the small peripheral vessels and progresses in a proximal direction to the point of complete occlusion.

The arteriogram in arteriosclerosis on the other hand shows an irregularity in the vessel wall and in the lumen corresponding to the extent of the sclerosis present. This process is usually more noticeable in the larger vessels as in the femoral and popliteal.

The femoral may be occluded in mid-thigh with such extensive collateral circulation at the point of occlusion so as to nearly re-establish a normal lower femoral vessel or there may be a complete occlusion at the popliteal bifurcation at which point the collateral circulation is not sufficient to re-establish circulation. The presence of aneurysms is usually quite obvious. The presence of large thrombi in aneurysms may also be easily seen.

The value of arteriography to the surgeon in arteriosclerosis and thrombo angiitis obliterans with gangrene of the feet or toes is very great. It determines the site of occlusion, its cause, whether due to sclerosis or endarteritis and the extent of collateral circulation. These facts are a great aid in determining the point of amputation and the prognosis based on the extent of the collateral circulation.

ACKNOWLEDGMENT

I am deeply indebted to Dr. Carl H. Greene for his kind co-operation and assistance. The interest and help of Dr. Greene has made arteriography possible in this department.

8525 86TH STREET

"ANTISEPTIC" ADVERTISING

The patent-medicine brigade have seized upon the surgeon's use of antiseptics and are trying to make the public believe that they should have antiseptics everywhere in the house except on the dinner table, and even then in the pocket. Shrewd advertising, says a statement from the Consumers' Research Bureau, of Washington, New Jersey, has made an apparent daily necessity out of what is a rather rarely needed household article. Normal skin when clean and dry disinfects itself rapidly. The normal secretions of the lining membrane of the nose and mouth have a natural antiseptic or protective power, as do likewise the secretions of the mucous surfaces of the vagina. Most bodily tissues, indeed, do better with the least medication possible, and the recent current campaigns to persuade everyone to regiments of "antiseptic" inhalants, mouth-washes, gargles, douches, and so on, are absolutely against medical evidence, and are purely business-getting enterprises.

Such antiseptic rituals are costly to the consumer, often harmful to his bodily tissues, and exceedingly profitable to the patent-medicine industry—a generalization which applies to many so-called ethical and reputable products as well as to the common fakes and nostrums advertised in standard popular magazines and newspapers.

The unwise use of an antiseptic or the use of the wrong antiseptic for a given purpose may seriously retard recovery, by destruction of reparative tissue, may cost a life, or result in the

amputation of a limb. Advertising claims are not to be trusted in this field. Even brine and vinegar are stronger antiseptics and disinfectants than some proprietary products widely sold as potent germicides.

Dirt and oil increase the likelihood of infection. Hot soap suds made of laundry or toilet soap compare favorably, in the removal of germs on the skin, with most disinfectants and antiseptics on the market, being like them effective against a few organisms but not against most of the common ones. The cocoanut oil soaps, which are rather irritating to the skin, are regarded, among soaps, as the more efficacious skin disinfectants.

It is important in every case to note that antiseptic, disinfectant, and germicidal substances are not usable interchangeably. Each, silver protein or iodine, for example, has its own field wherein it is potent or safe. No antiseptic should ever be used without full understanding of its limitations and of its field of utility.

No proprietary mouth wash is, indeed, useful or effective in the ways usually claimed. The healthy mouth does not need a mouth wash—persistent use in the normal mouth may indeed be harmful; the unhealthy mouth will require more definite and specialized treatment than use of a proprietary mouth wash. Antiseptics capable of actually sterilizing the tissues of the mouth will destroy them, and if sterilization were possible it could last but a few minutes at best.

THE PHYSICIAN AND PHARMACIST OF THE FUTURE

FREDRICK D. LASCOTT, B.A., B.S. PH.G.

New York City

Meetings of physicians and pharmacists are not new by any means. As far back as 1224, Frederick II of Sicily in an edict, declared that "prices charged for medicines were to be regulated and the physicians were forbidden to share in the profits of prescriptions by clandestine arrangements with the confectionarii [pharmacists]"

In France during the sixteenth century, however, the relationship between physicians and pharmacists was not so harmonious. Disputes reached such a serious point that the physicians wrote prescriptions for only simple remedies which could be supplied by herbalists.

How History repeats itself!

For the last decade, the pharmacist has had to listen to the jibes of his brother, the physician as well as the general public concerning his ability or lack of ability as the case may be, "of properly preparing a salad dressing or making a club sandwich." He has listened good naturedly but nevertheless in many cases it has hurt his pride and justifiably so. He began to question the wisdom of his attendance at the College of Pharmacy or the years he spent as an apprentice doing everything from powdering corks to filling capsules of zinc valerate. Fresh from college, having heard speeches at commencement concerning the honorable profession of pharmacy and its importance in relation to medicine, he entered the drug business with the hope that the knowledge gained would be put to use. Aptly expressed by Robert Louis Stevenson, "It is a sore thing to have labored along and scaled the arduous hilltop and when all is done, find humanity indifferent to your achievement."

He studied the prescriptions which were brought into the store but instead of finding the tinctures, infusions, decoctions, troches, and so on, about which he had learned, he began to realize that the only thing for which he used his spatula was to remove labels from patent medicine bottles.

The time soon came when he noticed that the patients, realizing that the physician was prescribing proprietaries, began

to read off prescriptions. True sometimes when a physician wrote for Argyrol, the patient would get Agarol or *vice versa* but after all the pharmacist was not given that valuable document to study. And then the physician began to find that self-medication suddenly took an alarming increase. "Dr. Jones only prescribed some So and-So's Aspirin Tablets and some So and-So's Vapomear when I had a cold, why don't you try it?"—and the patient did, until finally pneumonia developed and Dr. Jones had to be called in anyhow. He was tickled pink when he called his pharmacist for pneumonia serum and he was able to supply it and happily give him the benefit of his knowledge of its administration. Old Doc Jones may even have felt a bit guilty for having teased friend pharmacist about his soda fountain.

But let us for a moment study the whys and wherefores concerning the soda fountain and luncheonette and hardware departments of the drug stores of the last decade. The pharmacist had to pay his rent, and other expenses and try to have something left over, and so, much against his wishes, he put in these sidelines. And since so much has been blamed on prohibition let's put a little more on the list. The soda fountain took the place of the bar for a quick lunch. Now with the repeal era well under way, except for a few States, and the return of the bar, a serious blow has been struck at the soda fountain. We see also the great increase of professional pharmacies. New ones are being opened daily. Pharmacies whose one thought is to serve the physician and the public.

A number of my students have come to me for my opinion in this regard and I have told them that I think the time has finally come when there is to be a separation between the professional pharmacy and the department store type drug store where the drug department is usually no larger than a telephone booth.

What must the pharmacist do to help warrant the confidence and support of the physician of the future and what must the

physician do to encourage the pharmacist of the future to once again be his right hand man in his battle against disease?

Both professions must clean house.

Chapter Two of the code of Ethics of the A.Ph.A. entitled, "The duties of the Pharmacist in relation to the Physician," states as follows:

The pharmacist even when urgently requested to do so should always refuse to prescribe or attempt diagnosis. He should under such circumstances refer applicants for medical aid to a reputable legally qualified physician.

I know that most pharmacists are strict in following the above mentioned dogma, but the small percentage who do violate it, are the cause for criticism of our entire profession.

Since the Supreme Court handed down the decision that the Ownership Law was unconstitutional, there has been a tremendous increase in the number of non-pharmacist owned drug stores and the subletting of prescription departments by cut-rate cosmetic shops to men who in most cases could not find employment in reputable pharmacies.

These individuals are responsible for much of the criticism wrongfully heaped on the shoulders of the conscientious pharmacist who has striven to abide by the ethics of his profession. It is this type of store which is largely responsible for the counter-prescribing and so-called diagnosis which the honest pharmacist does not tolerate and which the physician is justified in criticising.

A friend of mine had an experience a few weeks ago, which in addition to a lesson in ethics taught one of his clerks a lesson in economics. A maid employed by one of his customers rushed into the store with a handkerchief covering the palm of her hand. She had cut herself while opening a bottle and tearfully asked to have the wound treated. The pharmacist immediately informed her of the danger of infection and suggested she see her physician. Inasmuch as he lived some distance away, she asked the pharmacist to suggest someone in the neighborhood. He called a young physician who had just located close by and asked him whether he would be kind enough to see a patient immediately.

As she left the store for the physician's office, his clerk, recently employed in a cut-rate cosmetic shop, turned to him and said that he could have turned that into a sale of at least \$1.50 what with bandages, per-

oxide and adhesive and cotton, and very subtly inferred that the proprietor's salesmanship was lacking.

The proprietor dismissed the matter but felt very much pleased a short time later when the maid returned with her hand neatly bandaged and two prescriptions to be filled—one for a solution of bichloride and the other for Elixir Triple Bromide, N.F. She thanked him profusely for having referred her to the doctor who had removed two slivers of glass from her hand and had told her of the pharmacist's wisdom in suggesting immediate and proper medical treatment. In a few minutes the physician phoned to thank him for referring the case to him and they since then have had very cordial relations.

You can picture the delight with which the pharmacist had his clerk ring up the sale which he assures me was considerably more than the amount the clerk had mentioned.

What had the pharmacist accomplished:

1. He had done the right thing for the patient (preventing infection, and so on).
2. He had made a friend of the physician.
3. He had incidentally made a sale without feeling that it was not completely legitimate.

Now what about the physician and his part in pharmacy of the future. He too should take steps to bring about this Utopian harmony of the two professions.

Fortunately, self dispensers are on the decline because the public is sufficiently intelligent to realize that a physician except for emergency cases cannot possibly stock the variety of medicines required for every type of illness. The physician who prescribes proprietaries is encouraging the use of patent medicines indiscriminately.

I have to think of the story of the wise old man who went to his physician for a physical examination. After the examination, the doctor, although finding nothing wrong, told him to get some medicine at the drug store. He asked the doctor how much he owed him and the physician said \$5.00. "Here it is. After all, the doctor must live," was his parting remark. He went to the pharmacist, obtained the medicine and upon asking how much it was, he was told \$1.00. "Here's your dollar. The druggist must live," and thereupon he went home, opened the bottle and poured it carefully down the sink and said, "Alas, I too must live."

True, we all must live, but we must not force the public to spend their money on medication whose success in many cases is only due to high pressure advertising.

A large number of manufacturers, to introduce a pharmaceutical product, start by soliciting the physician and when it has been generally accepted, advertise it directly to the layman. The prescription proprietary of yesterday is the patent medicine of today. The prescription proprietary of today is the patent medicine of tomorrow.

Why must there be twenty-eight brands of digitalis when they are now all standardized? Why must there be sixty-three brands of ephedrine when any good pharmacist is able to prepare oily and aqueous solutions of the salt? The same applies to the many high-priced proprietary sedatives that have in recent years duplicated such splendid formulas as Elixir Three Bromides and Elixir of Paraldehyde.

U.S.P. and N.F. preparations are of proven and tested worth. Both books are revised every ten years by a committee of non-paid physicians and pharmacists of unquestionable integrity and exceptional experience in their respective fields.

Many—of course, not all—prescription proprietaries are nothing more than attempts to duplicate other proprietaries or in some cases official preparations cloaked by trade names and subsequently higher priced. The patient must pay for the tremendous expenses involved in advertising and detailing the physician.

Let us forget the past.

Gentlemen of the medical profession of the future!

Watch out against the growing tendency toward socialized medicine. You must, wherever possible, eliminate economic waste.

Remember that every time you prescribe a prescription proprietary—using a brand name—you cause some pharmacist to increase his stock—increase his overhead—and naturally increase the cost to your patient. The only excuse for prescribing proprietaries should be when the official books do not have a preparation of equal therapeutic value—and in case you are not aware of the many splendid formulas in the U.S.P. and N.F. your friend, the pharmacist will gladly assist you by presenting you with a condensed formulary supplied by the New York State Pharmaceutical Association.

And now members of the Pharmaceutical Profession of the Future!—

Show your colleague, the physician, that you will continue to merit his confidence. Stick to pharmacy, that grand old profession, but don't rest on your laurels. Keep your stock of U.S.P. and N.F. preparations fresh, continue to assist your friend the physician by having biologicals properly stored and a complete stock for his immediate needs.

Improve your equipment. Throw away the "No Admittance" sign from above your Prescription Room Door. As a matter of fact throw away the door. Let the physician see what goes on in your "Sanctum Sanctorum."

Supply him with formulas which will encourage him to prescribe real prescriptions and not force him to rely on patent medicine vendors. Advise people to visit their physicians periodically and so show him that you are working with him and not against him in what, after all, is the basis of both of these noble professions.

"The untiring battle against disease and the improvement of the health of our fellow beings."

1209 LEXINGTON AVE.

HOW NOT TO GET THIN

That seems to be the advice needed by thousands who are going at it in unwise and even perilous ways. The Chief of the Division of Public Health Education of Pennsylvania declares that it is only "a very true though sad fact" that hundreds of women have killed themselves during the past decade by senseless and excessive dietary reduction practices. Caught in the wave of mass psychology which emphasized the so-called athletic figure, legions of misguided members of the feminine contingent were attracted to hazardous drugging and misguided

food practices. Premature funerals, not to mention countless prolonged illnesses, just naturally followed. All of which, he adds, goes to prove that the way to get thin is first not to get fat; and second, if over weight, then to see one's physician and be guided by his directions.

Millionaire Octogenarian: "Will you marry me if I have my health rejuvenated?" Pretty Gold Digger: "I'll marry you all right, but you leave your health the way it is."—*Oral Hygiene*.

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EDITORIALS

Recent Events

It is unusual during the course of administration affairs to pause long enough to summarize accomplishments. But two recent events are noticeable in that they mark progress. In the first place, the discussion at the recent Council meeting, and at the Conference of Committeemen and officers, cleared away uncertainty and clarified mooted questions and demarcated immediately objections. In the second place, the new Committees which are under way started activities. The Committee on Trends is under way. The Committee of District Branches is organized. From the one, "The Romance of Medicine," will reach the public to whose service, all our efforts are dedicated, and from the other there should result regional conferences which having a common objective, may well result in working out schemes and plans, suitable for given localities.

We have two major problems crying for solution. First, the medical care of the indigent. These are wards of the community in which they reside, and the responsibility for them is community business. The doctor should not be doubly

taxed. On the one hand, he carries his share of the burden as a taxpayer, and, on the other hand, again as a physician he is taxed by giving his services gratis. Medical care of the indigent should be paid by the community alone.

The second major problem is to find ways and means of overcoming the economic barrier which among wage-earners in the lower income groups prevents modern medicine from delivering them its best. President Roosevelt has said that "the care of the sick is a local responsibility." The set-up by the District Branches makes it feasible to achieve accords in each locality on these problems.

Finally, there is our concern with legislation. We shall endeavor to maintain unimpaired and intact the Medical Practice Law; we shall endeavor to keep unhindered and unhampered by restrictive legislation those in our ranks who day in and day long are searching for medical truths through animal experimentation and other research; we shall try to curtail the activities of "cults" and "cultists," and strengthen preventive medicine where health laws need strengthening by adoption of new measures to protect the public health, and lastly, we shall help with all honorable means at our command to rectify the abuses and racketeering which has developed in the operation of the Workmen's Compensation Laws.

Let's Correlate the Groping Units

"Must we go on in many groping, disorganized, separate units to defeat, or shall we move as one great team to victory?"—FRANKLIN D. ROOSEVELT.

In our ranks are many organized groups having objectives which are not always those of organized medicine. Occasionally, that for which they strive is in direct opposition to the stand taken by our State Society. In the results of the crusading spirit of those sincerely endeavoring to accomplish their purposes, the great public, and sometimes the legislature, sees the profession divided into many groping separate units. This division of the profession into separate units has become

marked especially since the publication of the Report of the Committee on Medical Care, and the discussion of the panacea which it recommended to all. In line with the action of the Medical Society of the County of Monroe, we too are "lacking in confidence in the panacea effect of solution of the problem by insurance action except under rate sociological groupings which we do not believe are existent in our Country."

Our society has repeatedly recorded its position in opposition to compulsory health insurance. We cannot doubt the sincerity of the medical groups among us who differ from our viewpoint. A few of them only can be said to be swayed by their own personal economic stress under which the present day finds them.

The JOURNAL's news columns (on another page in this issue) contain the report of an action by the Council, wherein there is set up machinery by which it may be possible to establish one great team. Great is the responsibility of the District Branch Presidents, in that success or failure of the plan will depend upon the manner of men selected to carry out the onerous duty of finding and achieving a mutually acceptable thetic formula to which all medical practitioners can subscribe.

Too often, medical groups are the slaves of their specific differences. Their flatterers who live off them, intensify these differences to stimulate their vanity and provide medico-political occupation for themselves.

Ours, on the contrary, is not the rôle to accentuate differences but to find and promote the common purpose.

A Scholar in Surgery

He used to surprise us years ago when we were internes. "We will go to your rooms" (near the Operating Room) "and collect all the books you have on this subject and mull them over." There succeeded memorable moments of reading, discussion, classification of knowledge, and conclusion. He never hurried, never wasted time, never stopped until all the work was done, but he was always studying, capturing events,

reviewing and reclassifying information for us. He taught by making us feel that we were helping him to study. Later we learned that if you wished any special information on a surgical subject he could name the work, volume, and page where it was to be found, whatever its date or language. A few days ago he passed away in his ninetieth year. A host of reasons call his profession to attention and meditation. For the JOURNAL, let it suffice for the moment that he was twice president of his County Society and once president of the Medical Society of the State of New York.

Born in 1845, one of five children of a pioneer itinerant Methodist clergyman in the Middle West, he was trained in the self-help, co-operative spirit, resourcefulness, and economies of a parsonage where the average income was five hundred dollars per year and the highest less than a thousand. By happy arrangement the family resided in Ann Arbor, Michigan, for seven years, and the educational advantages of the schools and university were available. Religion and education were stressed in the home. Frugality and working for each other were necessary.

Upon graduation, came a postgraduate year in chemistry and premedical subjects leading to a master's degree. During the Civil War he enlisted as a hospital-steward in 1863, and was assigned in January, 1864, to a regiment of colored cavalry at eighteen years of age. Soon he was transferred to a general hospital in Springfield, Missouri, and mustered out in September of '65. At once he returned to the university from which he received his degree as Doctor of Medicine the following year, credits being given for his premedical scientific year and his service in the army.

When Harper Hospital of Detroit needed a house surgeon he won the position. His superiors there were men of large experience. "At the flame of their enthusiasm and ambition I lighted my own torch which has never since been extinguished."—Realizing then that his training was still quite incomplete he spent the winter of 1867 in a postgraduate course at Bellevue Medical School. Then came appointment as Assistant Surgeon in the

Navy in May, 1867. At Brooklyn Navy Yard, on the old U.S.S. *Pennobscot*, cruising the West Indies, and on the *Saratoga*, infested with yellow fever, he served.

After three years he married. In 1871, after the birth of the first son, ordered to indefinite sea duty, he concluded that he could not do justice to his family in the Navy and resigned. He regretted loss of associations he prized but placed family duty above all else. Slowly he established himself in general practice.

For ten years he taught Anatomy at Long Island College Hospital, serving as adjunct professor for three years. Then he was invited to become a member of the Managing Board to organize the proposed Methodist Episcopal Hospital. In 1884 he spent five months studying European hospitals and surgical clinics. Before his return the great founder of the hospital had failed, but one building of the several erected was completed in 1887, the staff was organized, and its work began. Until 1907 he served as Attending Surgeon when, differing in ideals from the management, he resigned.

Transforming his home into a private hospital he and his two medico sons developed their surgery in a new and intensive manner, winning applause from their professional colleagues. Ten short years full of joyous accomplishment were ended by the untimely death of the elder of the two sons, while the other was at the Mexican Border with the Army. The hospital was transferred to other hands. During those ten years notable contributions were made to the surgery of peri-colic membranes, of the prostate gland, of gastro-intestinal affections and their x-ray diagnoses, and of bladder tumors and surgical diseases of the kidney.

In 1878 he and a few ambitious friends had formed the "Anatomical and Surgical Society" and at the end of 1879 Volume I of the *Annals* of this Society was published. The second year came monthly publications by Putnam's Sons. This continued until 1884 and was the fore-runner of the *Annals of Surgery* which first appeared in January, 1885, the only journal in the English language devoted exclusively

to surgery. Until 1933 our "Scholar in Surgery" served brilliantly as its editor-in-chief. The benefits he thus afforded his profession and the world-public cannot be estimated.

During his long professional life he studied practically and recorded what he observed. During the decade 1872-82 his earnest researches were in the value of tracheotomy in laryngeal diphtheria and the fractures of the wrist. His contributions to literature on these subjects brought him his earliest large recognitions. How different from the work of 1907-17!

His writings in journals, monographs, books, chapters of textbooks comprise thousands of pages of careful, well-weighed, accurate writing in well-chosen words. His literary work was carefully planned and religiously followed. Once, for eighteen months, when contributing to a great System of Surgery, he arose at six and wrote from six-thirty to eight-thirty, appearing at his hospital at nine. Thus only could he make this contribution and leave his regular duties undisturbed.

Our "Scholar" trained surgeons of ability and distinction several of whom became devoted colleagues. Some are able writers. All realized his important influence. His standards were mountain-high and rock firm. Intellectually entirely honest, he sensed that "accuracy is the half-brother of honesty." As the scientific story was told, romance, color, drama were brushed aside to provide force for truth. This unswerving honesty held many close to him. Some accused him of severity and inflexibility. This apparent fault was due to an idealism which stood rigidly for truth and justice, scorning veneer. He had a warm heart but a serious demeanor. He possessed a keen sense of humor but no gift of frivolity.

A medical bibliophile, this Master found delight in accumulating rare volumes of historic merit. Priceless Vesaliana, works of Galen, Pare, Mundinus led the distinguished files. He delved into the characters of ancient anatomists and surgeons. He wrote of them in essays, deeming the most important that devoted to the Anatomist DaLuzzi (1265-1326).

His operative work was typical of the scholar. After patient, often long study of the case, a logical plan of treatment was evolved. His technical procedures were careful, deliberate, determined, and they fulfilled his plan regardless of scintillating suggestions by his assistants. During the case study he patiently considered every suggestion offered. The course once decided upon could be altered only by emergency or unexpected findings.

Patriotism strongly flavored this man's life and in his later years, when active surgical work had been relinquished, he was active in the Grand Army of the Republic. In 1921 he was made its Commander-in-Chief. He was a nature lover and delighted in his lakeside country home. He traveled widely and studied civilization and peoples.

A model of scientific industry, he was a student of extraordinary devotion. He had courage, a deliberate initiative, and exhaustless patience in all his work. He was sceptical about new discoveries and methods, willing to help prove their worth or unimportance, prompt in acceptance of proven facts. Discrimination was a principle. He advanced, sometimes slowly, but

always faced forward. He was sure of himself—but modest. After the profession of his city, state, and nation, had gathered to do him honor after fifty years of practice, he wrote the following comment: "Why then should this host of friends be assembled to honor one of their own number was a mystery to me. The greater number of them were themselves physicians, my neighbors, my rivals for popular esteem and service. To receive from such a jury such a verdict of approval after forty years of strenuous activity among them might well be a source of satisfaction. I appreciated it with all humility, as a movement upon the part of most of them rather to honor the ideals of professional life which I had striven to exemplify among them, than as a personal tribute to myself. In that spirit I could not fail to enter with joy and pride into the evening's mood." On that evening W. J. Mayo pronounced him to be "one of the greatest of surgical teachers-by-the-written-word."

Altogether the career of Lewis Stephen Pilcher was the conscientious conduct of a well ordered, scholarly life.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked private. All communications must carry the writer's full name and address which will be omitted on publication if desired. Anonymous letters will be disregarded.]

December 27, 1934

To the Editor

At the last annual meeting in Utica I read a paper on "Gonorrhea in the Female" later published in the JOURNAL for August 15, 1934, p. 731, and find myself in consequence, in a peculiarly embarrassing situation. The paper was a compilation from well known texts and in no sense an original contribution. I announced at the meeting of the section that it was not original but largely taken from other sources. Unfortunately the manuscript reached your hands without quotations and references and when published gave the appearance of an original article.

This contretemps is entirely chargeable to my own inadvertence and thoughtlessness. I had not thought of publication and therefore failed to insert in the MS the quotation marks and

references that would have replaced my introductory remarks at the meeting. I greatly regret the erroneous impression of originality that my carelessness must have given and hope you will find a place in your columns for this application.

Also I wish to supply for the information of those who may have read the published article the definite sources and portions thereof which I included in my compilation paper. These are:

Graves Gynaecology, 4th Edition—Introductory paragraph page 197. Methods of abode page 197. Bacteriological requirements page 198. Conditions present for growth, page 198. Historical structure of cervix page 383. Genital tract which may be infected page 200.

Curtis Gynaecology
Eden and Lockner's System of Gynaecology
Gynaecology and Obstetrical Monographs
(Pelvic Inflammation in Women Polak)
American Journal of Medical Science
(Article by Warren and Carpenter)
Ewing's Pathology
Boyd's Pathology

R. N. RITCHIE

News

of Interest to the Profession

THE COUNCIL:

ABSTRACT OF PROCEEDINGS AT THE MEETING OF DECEMBER 13, 1934

In addition to routine work the Council took definite action in the matters detailed below.

REPRESENTATION OF THE MEDICAL PROFESSION ON THE GOVERNOR'S SPECIAL ADVISORY COMMITTEE ON RELIEF AND WELFARE

The secretary was instructed to advise the Governor that the Council had designated Dr. Lawrence, the Executive Officer, to bring to the attention of the Governor the opinion of the council that there should be adequate representation of the medical profession of the State on his Special Advisory Committee on Relief and Welfare.

ELECTION OF CHAIRMAN OF THE COMMITTEE ON SCIENTIFIC WORK

For technical reasons there had been, for some months, a vacancy in this position. By unanimous vote the Council elected as Chairman, Dr. William A. Groat of Syracuse, who served in that capacity in the year 1933-34, with great success.

THE "TEN POINTS" AND COMPULSORY HEALTH INSURANCE

The Council formally adopted the following resolution, which was presented by Dr. Dougherty:

IN VIEW of the determined and persistent efforts of certain Foundations, Welfare Organizations, Governmental Organizations, and various groups of theorists with ideas based purely on sociological study, to regulate and govern the practice of medicine, the Council of the Medical Society of the State of New York deems it both wise and necessary to reaffirm the stand against Compulsory Health Insurance and the regimentation of the Medical Profession taken on previous occasions and to place the Society squarely behind Dr. Van Etten's "Ten Points" presented to and adopted by the 1934 House of Delegates of the American Medical Association in the following terms:

First: All features of medical service in any method of medical practice should be under the control of the medical profession. No other body or individual is legally or educationally equipped to exercise such control.

Second: No third party must be permitted to come between the patient and his physician in any medical relation. All responsibility for the character of medical service must be borne by the profession.

Third: Patients must have absolute freedom to choose a duly qualified doctor of medicine who will serve them from among all those qualified to practice and who are willing to give service.

Fourth: The method of giving the service must retain a permanent, confidential relation between the patient and a "family physician." This relation must be the fundamental and dominating feature of any system.

Fifth: All medical phases of all institutions involved in the medical service should be under professional control, it being understood that hospital service and medical service should be considered separately. These institutions are but expansions of the equipment of the physician. He is the only one whom the laws of all nations recognize as competent to use them in the delivery of services. The medical profession alone can determine the adequacy and character of such institutions. Their value depends on their operation according to medical standards.

Sixth: However the cost of medical service may be distributed, the immediate cost should be borne by the patient if able to pay at the time the service is rendered.

Seventh: Medical service must have no connection with any cash benefits.

Eighth: Any form of medical service should include within its scope all qualified physicians of the locality covered by its operation who wish to give service under the conditions established.

Ninth: Systems for the relief of low income classes should be limited strictly to those below the "comfort level" standard of incomes.

Tenth: There should be no restrictions on treatment or prescribing not formulated and enforced by the organized medical profession.

And, furthermore, (the resolution reads), to call upon the Officers, Committees, and all loyal members to oppose and combat these evils wherever and whenever occasion arises with the distinct purpose of making known to the public and to the profession at large the official opinion of organized medicine in matters of importance to both physician and patient.

NEW STUDY COMMITTEES SET UP WITHIN THE EIGHT DISTRICT BRANCHES

The following resolution, presented by Dr. Kopetzky, was formally adopted:

Resolved, That there be set up a committee in each District Branch to bring together organized groups which exist within the ranks of organized medicine, for the purpose of rendering available to the officers and mem-

bers of the Medical Society of the State of New York, the objectives, studies and purposes of these groups, and be it further

Resolved, That this committee endeavor by means of conferences and round table discussions, and any other legal means, to co-ordinate the endeavors of all members of the organized profession along parallel lines, within the framework set up by the Ten Point Program of the American Medical Association, and be it further

Resolved, That, where adjacent District Branches comprise a geographical unit, like the City of New York and its Metropolitan Area, the District Branches comprising such unit may be combined in the formation of this committee in carrying out the purposes of this resolution, and be it further

Resolved, That when and if common ground is found and a conclusion arrived at by any of these District Branch Committees, the Chairman of such Committee shall transmit his report to the Public Relations Committee, which may, at its discretion, hold further hearings and study upon the topics contained in such report, and after further consideration and deliberation make report to the Council, its Executive Committee, or directly to the House of Delegates, as the case may require, and be it further

Resolved, That the Public Relations Committee, receiving reports of District Branch Committees which are not in accord with one another, may at its discretion hold conference with such District Branch Committees which hold diverse views for the purpose of finding common ground between them, thereafter reporting its conclusions to the Council, its Executive Committee or the House of Delegates as the occasion may necessitate, and be it further

Resolved, That when and if the discussions at the Branch Committee make necessary co-ordination and the use of information possessed by the Committee on Economics, there then shall be representation from the Committee on Economics to the said Branch Committee. If conclusions are arrived at which would make co-ordination with the Committee on Economics necessary the good offices of that Committee shall be used, joint meetings held, and the results of such joint meetings and conferences reported to the House of Delegates, to the Council or its Executive Committee as the needs of the given situation may require, and be it further

Resolved, That no action at any of the conferences or committee meetings shall be deemed finally binding upon the State Society until approved by the House of Delegates, the Council, or its Executive Committee, and be it further

Resolved, That, pending discussion shall not be publicized to the general public, to the newspapers or to public officials. Publicity may properly be given in this relation to any conclusion arrived at which has received approval and endorsement by the House of Delegates, the Council or its Executive Committee.

AMENDMENT TO THE PUBLIC HEALTH LAW IN RELATION TO THE PUBLIC HEALTH COUNCIL HELD DESIRABLE

It was decided that it is very desirable to amend the Law in such fashion as to provide that when the Public Health Council promulgates amendments to the Sanitary Code such revisions shall not become effective until six months after they have been laid down.

It was also decided that the Law should be amended so that *two members* of the Public Health Council shall be practicing physicians.

COMMITTEE ON PUBLIC RELATIONS

The following recommendations of the Committee, designed to bring closer contact between welfare administrations, State and County Societies were adopted:

1. There shall be a local committee of the County Society, preferably a Public Relations Committee, to act as an advisory committee to the welfare administration in that county.
2. The State Committee on Public Relations shall through such local committee undertake to aid, assist, and instruct each County Society in working out the proper relationship between the physicians on the one hand and the law and local government on the other.
3. The Committee on Public Relations deems it necessary, in order to carry out the first and second recommendations, that the Executive Officer be instructed to act as its representative in conferring with the committee of each County Society, the county welfare officials, and other relief agencies, for the purpose of effecting a harmonious administration of medical law.
4. That the Executive Committee be invited to place this whole matter permanently in the hands of the Public Relations Committee, and that it direct the Executive Officer of the Society to act with the Public Relations Committee as may be necessary to maintain contact between the committee, and National, State, and County Welfare and relief agencies, and between the committee and members of the County Medical Societies.
5. Contingent upon the acceptance of the previous recommendations, we further recommend that the Executive Committee request each County Medical Society to appoint and authorize some permanent local committee, preferably its own Public Relations Committee, to deal with local welfare and relief officials who carry on the medical phases of local welfare and relief administration, and that this county committee be instructed to ask guidance and counsel from the State Public Relations Committee for such dealings.

COMMITTEE ON ECONOMICS

These recommendations of the Committee were adopted:

1. That the principle of periodic payment of the expense of medical care out of income, through established accredited agencies, be endorsed by the Medical Society of the State of New York,

2. That the JOURNAL Management Committee be authorized to publish articles dealing with this topic.
3. That the Committee on Economics be instructed to engage in conversations with representatives of the banking industry for the purpose of development of a concrete proposal

for the financing of the expense of medical care, provided, however, that there shall be no commitment of the Society to any agreement without consideration by and further instruction from the constitutional body.

D. S. DOUGHERTY, M.D.,
Secretary

COMMITTEE ON SCIENTIFIC WORK

ANNOUNCEMENT

The Chairman, Dr. William A. Groat, announces that applications for space in the Scientific Exhibit at the Albany Meeting, May 13, 14, 15, 1935, will now be received. Application blanks and other information may be secured from Dr. William A. Krieger, 103 Hooker Avenue, Poughkeepsie, who is in charge of the Exhibit.

The Scientific Exhibit is a feature of growing importance at the annual scientific assembly. There is no better method for presenting new research work promptly, or for illustrating clinical methods and results clearly and quickly to a large number of physicians.

It has been decided by the Executive Committee that awards of merit shall be made.

COMMITTEE ON LEGISLATION

BULLETIN NO. 1, JANUARY 8, 1935

The 1935 legislature has broken all records for promptness. The Senate reported 95 bills introduced the first day, while last year only 67 were introduced in the first week. And to prove that it was seriously in earnest that it shall do business from the first day, standing committees reported favorably on 13 bills on the second day. Hearings have been announced on important bills for the second week in January, another record. Among the 199 bills that are before both Houses, the following have a special interest for us:

Senate Int. 1, Byrne; Assembly Int. 1, Killgrew, Labor Law, creating an unemployment insurance fund and providing for method and mode of its administration and appropriating \$100,000. Referred to the Labor Committee.

This bill includes no medical phase and notice of it is sent you as a matter of information. We shall carefully read all bills submitted on this subject and call your attention especially to those that may contain a medical clause, since employment and good health are so closely related.

Senate Int. 18, D. T. O'Brien; Assembly Int. 18, Canney, amends the Workmen's Compensation Law, by requiring all workmen's compensation insurance, other than that carried by self-insurers, to be underwritten by the State Insurance Fund. Referred to the Insurance Committee.

This is one of the Governor's recommendations. It provides for the extension of the present State Fund. We have in the past opposed this measure but have felt all the while that it was growing in popularity. The objections we have had to it are based not on the principle involved but on the manner of administration. We have had many complaints from physicians claiming that the State Fund is more difficult to do business

with than any other insurance company; and we have also seen the present State Fund violate the spirit of the law, if not the letter, by designating physicians to whom employers carried by them should send their injured employees.

Senate Int. 19, N. A. O'Brien; Assembly Int. 19, Kantowski, amending the Workmen's Compensation Law and Labor Law, for eradication of medical abuses such as fee-splitting and solicitation of injured in connection with administering Compensation Law, by increasing from 10 to 15 number of members of Industrial Council, enlarging its powers and appropriating \$10,000. Referred to the Labor Committee.

This is a revision of the first printing of the Esquirol-Livingston workmen's compensation bill of last year. The revisions have improved the bill; it now provides that instead of a medical advisory council, the Commissioner of Labor and Industry shall have the advantage of five physicians added to his Industrial Council, making the Council hereafter a body of fifteen men, five representing labor, five representing industry, and five representing the State. This is a very desirable provision. We believe that if the Commissioner has the advice of five physicians on his Council many of the difficulties encountered in the past in administering and working under the Workmen's Compensation Law will be adjusted and eliminated.

Senate Int. 20, Coughlin; Assembly Int. 20, McCaffrey, amends the Workmen's Compensation Law by extending the law to embrace all disabling diseases and illnesses arising out of or in the course of employment. Referred to the Labor Committee.

This is the occupational disease bill that we have annually opposed. It is identical with the four or five bills that were before us last year. It would make all disabling

conditions incident to occupation, compensable. There can be no argument with regard to the principle involved, the difficulty again is a practical one incident to its administration. There is no definition of an occupational disease or disabling condition and it will encourage malingering among those who are inclined that way. The responsibility for justice will lie almost entirely with the physician, and we know how difficult it is to get a clear and concise statement of condition from our most cooperative patients. This bill also has been gaining popular support annually and now is one of the Governor's recommendations.

Senate Int 44, Ferron, appropriates \$3,000-000 for supplying undernourished and needy children babies and nursing mothers with fresh free milk, from moneys derived from bonds or borrowed in anticipation of receipt of proceeds thereof, authorized by Chapter 718, Laws of 1934. Referred to the Finance Committee.

Senate Int 45, Leason concurrent Assembly Int 45, Corbett. Assembly Int 70, Moffat. Senate Int 60, Desmond.

These bills are proposals for the reorganization of county government. We should be interested in all of these efforts to make certain that none is adopted which does not make satisfactory provision for public health and the practice of medicine.

Senate Int 67, Mandelbaum amends the Public Welfare Law, by reducing age limit for old age relief to 69 on July 1, 1935 to 68 in 1936 to 67 in 1937, to 66 in 1938 and to 65 in 1939. Referred to the Relief and Welfare Committee.

We should be interested in all moves made to reduce the age of eligibility for old age pension inasmuch as medical care for the pensioners is provided by the State.

Senate Int 77, McCall, amends the Civil Service Law by providing applicant for examination for position in competitive class must be a citizen of the United States and have been a resident of State for two years immediately preceding date of examination. Referred to the Civil Service Committee.

Let us review again our opinion of these bills. No 19 which is known as the "medical abuses" bill based on the report of the special commission appointed by the Governor a year ago and now carrying a provision for the addition of five physicians to the Industrial Council, giving Organized Medicine equal representation to that of Labor and Industry, is approved. We shall support this bill because we believe that the addition of physicians to the Industrial Council will obviate many of the difficulties of administration which in past years have annoyed and irritated the physicians.

Number 18, requiring all workmen's compensation insurance, other than that carried by self-insurers, to be underwritten by the State Insurance Fund. We have always opposed this idea, but the bill as drawn this year provides that it be administered by a special commission appointed by the Governor and that it be administered by the Commissioner of Labor and the Industrial Council. If bill number 19 is passed, physicians will be represented on this Industrial Council and we expect the administration of the fund to be more sympathetic to the practicing physician than the bills in former years offered. Therefore, our opposition to this bill will be tempered by the possibility of the enactment of number 19.

Number 20, the blanket occupational disease bill, has likewise been opposed by us in previous years although we have always maintained that the principle upon which it is based is correct, that if any disabling conditions incident to an occupation are compensable, then all should be compensable, but we have maintained that a blanket law will encourage malingering. When, however, the law will be administered by the commissioner advised by a council on which physicians sit, we can appreciate that malingering may be kept at a minimum much more so than would occur where the Advisory Council is composed of laymen entirely. Therefore, we are supporting this bill provided number 19 is enacted into law.

You will note that if this bill is enacted into law, applicants for civil service positions must offer citizenship in the United States and residency of two years in New York State immediately preceding date of examination.

Senate Int 98 Hanley, Assembly Int 53, Ehrlich amends the Labor Law, creating an unemployment reserve fund, employees to contribute 1 per cent of earnings, and providing for certain credit on State taxes for exempting certain employers or groups of employers for investment of fund in obligations of U S or any state, and appropriating \$100,000. Referred to the Labor Committee.

Another unemployment bill.

Assembly Int 59, Hamerman amends the Public Welfare Law by reducing from 70 to 65 years age of persons entitled to old age relief and permitting applicants not citizens but who have resided for 20 years in State to qualify for relief. Referred to the Judiciary Committee.

Another offer to reduce the eligible age for old age pensions.

Assembly Int 67, McGrath amends the Education Law, requiring public welfare officials to furnish indigent children with *car fares and eyeglasses*, and appropriating \$1,000,000. Referred to the Ways and Means Committee.

Assembly Int. 90, Whitney, amends the Agriculture and Markets Law to indemnify owner of bovine animal killed to prevent spread of Bangs disease for loss therefor, and appropriating \$1,000,000. Referred to the Agriculture Committee.

HEARINGS

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| Jan. 23—Sen. Int. 18 | { | State Fund, joint |
| Assem. Int. 18 | | hearing before the Insurance Committees. |
| Jan. 23—Sen. Int. 19 | { | Workmen's compensation bill, joint hearing before the Committees on Labor and Industry. |
| Assem. Int. 19 | | |
| Jan. 29—Sen. Int. 20 | { | Occupational diseases, joint hearing before the Committees on Labor and Industry. |
| Assem. Int. 20 | | |

This year our bulletins are being sent to all of the members of the County Legislative Committees instead of to the chairman alone, as has been our custom. It is our idea that each member of every committee should be fully informed upon the legislative problems that the Society is endeavoring to meet. We hope that you will read carefully our communications and elicit as much support for our program as possible. We know the value of having the support of prominent influential lay persons and we expect this widespread distribution of the bulletins to bring us greater support of that character. May we ask that you take this matter seriously, and when addressing legislators or lay persons, do not speak carelessly. Every year we have had instances where some physicians have, in their enthusiasm, asked legislators to oppose bills that were never introduced; for instance, last year there were several occasions when men wrote to their legislators opposing the advancement of a chiropractic bill. We know this to be a fact because the legislators showed us the letters.

Do not hesitate to write to Dr. Lawrence in Albany any time at all for any information you may desire regarding matters of legislation, the status of bills or the attitude of legislators. We wish to make the Legislative Bureau as useful to the members of the Society as possible.

There are still several County Societies which have not sent us the names of the members of their Legislative Committee. If the members of your committee do not receive this bulletin, please send us their names at once, because we must know how many bulletins to prepare and we can not have a large extra supply on hand, so that we

can not promise to supply with early bulletins persons whose names we get later on.

SPECIAL BULLETIN, JANUARY 9, 1935

Herewith you will find the names of the members of the Committees on Insurance and Labor and Industry in both Houses. Bills 18, 19, and 20 rest with these committees, as you have been informed. If any of the members of these committees are your own legislators, be sure to write to them giving your opinion of the merits of the bills; and it won't be a bad idea for you to send a copy of your letter to other members of the committees:

SENATE COMMITTEE ON INSURANCE

D. T. O'Brien, Chairman, New York; Thomas F. Burchill, New York; John T. McCall, New York; S. J. Wojtkowiak, Erie; H. L. O'Brien, Kings; Lazarus Joseph, Bronx; Frank B. Hendel, Queens; James A. Garrity, Westchester; Nelson W. Cheney, Erie; Joseph R. Hanley, Genesee, Wyoming, Allegany and Livingston; P. W. Williamson, Westchester; Martin W. Deyo, Chenango, Broome and Cortland.

SENATE COMMITTEE ON LABOR AND INDUSTRY

H. L. O'Brien, Chairman, Kings; William T. Byrne, Albany; Joseph D. Nunan, Queens; Ogden J. Ross, Rensselaer; S. J. Wojtkowiak, Erie; Edward J. Coughlin, Kings; David E. Doyle, Erie; Henry I. Patric, Lewis, Herkimer, Hamilton and Fulton; Joseph R. Hanley, Genesee, Wyoming, etc.; C. Tracey Stagg, Schuylar, Tompkins, Chemung and Tioga.

ASSEMBLY COMMITTEE ON INSURANCE

Edward S. Moran, Chairman, Kings; John H. Cahill, Albany; George W. Stewart, Kings; George F. Torsney, Queens; William Kirnan, Kings; Chas. H. Breitbart, Kings; M. J. H. McLaughlin, Bronx; James A. Burke, Queens; James J. Dooling, New York; Nicholas A. Rossi, New York; Hamilton F. Potter, Suffolk; J. Edward Conway, Ulster; Russell Wright, Jefferson.

ASSEMBLY COMMITTEE ON LABOR AND INDUSTRIES

Anthony Canney, Chairman, Erie; M. F. Breen, Rensselaer; Eugene R. Duffy, New York; F. J. McCaffrey, New York; Harold J. Crawford, Queens; Michael N. Delagi, Bronx; Joseph Di Fede, Monroe; James V. Mangano, Kings; Ralph Schwartz, Kings; Wilson Messer, Steuben; Harry E. Goodrich, Allegany; Edward K. Corwin, Schuylar; Wm. E. Morris, Saratoga.

HARRY ARANOW
B. B. BERKOWITZ
B. WALLACE HAMILTON
JAMES F. ROONEY
LEO F. SIMPSON
Committee on Legislation

County Societies

Chemung

Meeting of the Chemung County Medical Society held at the Elmira City Club, December 12, 1934 (98th Annual Meeting).

Following the dinner the meeting was called to order by Dr. Kinner, the President. The Secretary read the Minutes of the last meeting; they were approved and accepted. The Secretary then read the Treasurer's Report; this was approved and was filed with the Minutes.

Dr. Colegrove reported for the Legislative Committee, that 213 bills were introduced at the last session of the New York Senate. Only 32 of these bills were sent to the Governor of which he signed 14. These bills which were sent to him, all had the support of the New York Medical Society, except for the Osteopathic Bill, which fortunately the Governor vetoed.

Dr. Howland reported for the Public Health Committee, and stated that in the recent measles epidemic that there were about 2,000 cases reported to him and only 15 per cent of this total was reported by physicians.

He stated that his Committee had done no investigating into the Infant and Maternal Mortality as requested at the last meeting, by the Society.

Dr. Lewis reported for the Post Graduate Committee; he stated that he could not offer any definite course until he had had a conference with Drs. Farmer and Carpenter who plan to be in the city soon.

Dr. Lynch reported for the Economics Committee, and stated that steps had been taken toward the formation of the Physicians' Co-operative Association, and that this organization hoped to start the first of the year, and that the primary function of this organization was to educate the public.

Dr. Kinner requested that all members who had a copy of the Constitution and By-Laws of the Society submit them to the Secretary.

Election of officers was then in order. Dr. Stevens moved that the Secretary cast one ballot for the slate, nominated at the last meeting. This was seconded and carried. The officers for 1935 are: President, Dr. LaRue Colegrove; Vice-president, Dr. Charles S. Dale; Secretary, Dr. George R. Murphy; Treasurer, Dr. William J. Cusick.

Dr. Lynch then stated that the Society should take some action, as a result of the District Attorney's remarks at a trial, at which a person who we shall know as Mr. Roe made disparaging remarks about the medical profession. Following a discussion, Dr. John Burke moved that a committee of

three be appointed to draft resolutions to submit to the District Attorney; motion was seconded and carried. Dr. Kinner appointed a committee of Drs. Lynch, John Burke, and Butler. As there was no other business to come before the Society Dr. Kinner asked Dr. Lewis to introduce the speaker of the evening. Dr. Lewis then presented Dr. Kress, Director of the New York Institution for the Study of Malignant Diseases at Buffalo. Dr. Kress gave an extremely interesting and illustrated discussion on malignancy in general. He exhibited 176 slides by means of an apparatus, whereby he could show four slides at once. Following Dr. Kress' talk there was discussion and questions by Drs. Bleyer, Colegrove, Fish, Lynch, and Lewis.

Delaware

The Annual Meeting of the Delaware County Medical Society was held on December 18, 1934, and at this meeting the following officers were elected for the year 1935: President, Dr. Charles L. Wakeman, Andes; Vice-president, Dr. Orin Q. Flint, Delhi; Secretary-treasurer, Dr. William M. Thomson, Delhi; delegate to the Medical Society of the State of New York, Dr. Robert Brittain, Downs-ville; alternate delegate, Dr. Charles L. Wakeman, Andes.

The Committees appointed are: Censors, Drs. Dwight S. Hinsdale, Orin Q. Flint, and Edgar W. Hainlen; Public Health Committee, Drs. John H. Marsh, Clark S. Gould, and Charles L. Wakeman; Committee on Medical Education and Scientific Program, Drs. William M. Thomson, Thomas L. Craig, Dwight S. Hinsdale, and Walter E. Eells; Committee on Medical Economics and Public Relations, Drs. Donald R. Davidson, Floyd R. Bates, and James A. Holley. Committee on Legislation, Dr. William B. Morrow (of Walton) and Dr. Robert Brittain (of Downs-ville); Committee on JOURNAL Management, Dr. Thomas L. Craig, Davenport.

The Annual Meeting was small in attendance this year, because of a very bad night and very slippery roads. Dr. Harry Hall, of Oneonta, gave a well illustrated lecture on Sinus Infections.

Eric

Trudeau Memorial Luncheon. On December 12, 1934, Dr. Esmond R. Long of Philadelphia, Director of the laboratory of the Henry Phipps Institute for the Study, Treatment, and Prevention of Tuberculosis, and Professor of Pathology at the University of Pennsylvania, delivered the principal address at a Trudeau Memorial Luncheon. His sub-

ject was Tuberculosis Through Fifty Years. The occasion commemorated the fiftieth anniversary of the first sanatorium for tuberculosis in America founded by Dr. Edward Livingston Trudeau.

County Society Working to Reduce Maternal Mortality. The work begun in April, 1934, has gone steadily forward. Instead of undertaking to make another careful and costly survey, the Society, considering that previous studies such as that of the United States Children's Bureau, "A Study of Maternal Deaths in 15 States," and that of the New York Academy of Medicine, "Maternal Mortality Survey in New York City," could be taken as applying in general, set out to put into effect in Erie County certain of the conclusions to which those studies led.

The program is thus stated in the Erie County *Bulletin* for November, 1934:

Certain objectives have been generally recognized as of paramount importance, by all students of the subject, as arising from the studies made. Among these are:

(A) Education of the Public.—Surveys have taught that chief dangers to mothers' lives involving the responsibility of the public come from: (1) Failure of the patient to co-operate with her physician during pregnancy. (2) Failure of patient to obtain prenatal care or realize its importance or to understand what constitutes a minimum standard of prenatal care. (3) Danger to mother's life from abortions (at least one-fourth of all maternal deaths are due to abortions). (4) Demanding painless childbirth at unwarranted risks. The New York City survey states: "The medical profession is obligated to inform the lay public that the operative delivery undertaken merely to alleviate pain or shorten labor involves increased risk for both mother and baby." (5) Refusal by the public to permit postmortems makes it impossible, in many cases, to determine the exact cause of death.

(B) Improvement of medical obstetrical practice through: (1) Carrying out recommendations of the United States Department of Labor, Children's Bureau for enlarged medical obstetrical teaching, including "larger and better facilities for clinical obstetrical training" which will give undergraduate students a wider contact with obstetrical patients. (2) Establishment by Erie County Medical Society (in co-operation with the Health Department, Medical School, University of Buffalo and Academy of Medicine) of post-graduate courses open to all physicians. (3) To institute whatever means may be necessary to raise general obstetrical medical standards so as to reduce to a minimum those maternal deaths which have been laid at the physician's door, in the various studies, as due to "errors in diagnosis, general incompetence, carelessness, tendency to underestimate seriousness of obstetrical operations." The committee will, as soon as possible, make available to all physicians in the county the recommendations and conclusions drawn by the most important surveys.

(C) Urge the adoption by hospitals of the table of "Standards" formulated by American College of Surgeons for "Hospitals Taking Obstetrical

Cases," plus the additional recommendations deemed necessary by the New York Academy of Medicine Survey Committee.

(D) Amending birth certificate to include information on type of delivery. The Health Commissioner of Buffalo and the Statistician of the Health Department are now preparing a supplement for use in connection with our birth certificate which will give information as to the type of delivery and other necessary data in connection with our study.

(E) Closer supervision of midwives and their annual registration.

(F) Working through proper agencies for improvements of obstetrical nursing.

(G) Arranging for the filling in of C.B. 122.—Revised U. S. Department of Labor Children's Bureau chart within one month of every maternal death, from hospital records and attendants and by interviewing attending physicians. These findings are to be immediately turned over to the Obstetric Study Group of the Maternal Mortality Committee.

The Board of Health has already made available to the committee photostatic copies of each death certificate in which the cause of death is connected with a pregnancy.

Joint Medical and Dental Meeting. On January 8, 1935, a joint meeting was staged by the Medical Society of the County of Erie, Buffalo Academy of Medicine, the Eighth District Branch of the Medical Society of the State of New York, the Buffalo Dental Society, and the Eighth District Dental Society. The essayist was W. R. MacAusland of Boston who spoke on the Importance of the Oral Cavity in General Health and the Far Reaching Consequences of Abnormal Mouth Conditions.

Franklin

The regular meeting of the Medical Society of the County of Franklin was held in the Nurses' Lecture Room of the Alice Hyde Memorial Hospital, Malone, on October 24, 1934. Luncheon was served in Hotel Flanagan.

Business Session: The Comitia Minora recommended the payment of the current bills. Secretary's and Treasurer's reports were read and approved. There were seventeen members present and six visitors. The Secretary was directed to cast one ballot for the following officers for the coming year. President, Dr. R. G. Perkins, Malone; Vice-president, Dr. Edward Packard, Saranac Lake; Secretary-Treasurer, Dr. G. F. Zimmerman, Malone; Censor for three years, Dr. Carter R. Morse, Tupper Lake; Delegate to New York State Society Meeting, Dr. C. C. Trembley, Saranac Lake; Alternate, Dr. J. E. White, Malone.

The following doctors were unanimously elected to membership in the County Society: Dr. William A. Gaspar, St. Regis Falls; Dr. Karl Fischel, Saranac Lake.

Dr. Schiff, Plattsburg, on the request of Dr. Thomas P. Farmer, Chairman of the

State Committee on Public Health and Medical Education, discussed the study of the high infant mortality rates in certain counties of the State, particularly the northern tier.

Motion was made by Dr. Perkins and seconded by Dr. Finney that the chair appoint a committee to study the infant mortality situation in Franklin County to ascertain the predominant causes of such mortality. The following committee was appointed by the chair: Dr. Daisy H. VanDyke, Malone; Dr. P. E. Stamatiades, Brushton.

Dr. R. G. Perkins discussed a communication in Social Insurance distributed by the Committee on Economics of the State Medical Society against the activities of certain lay agencies in the matter of Compulsory State Health Insurance.

It was moved by Dr. Finney, seconded and approved that the Franklin County Society Legislative Committee act upon this letter and use their judgment regarding the advisability of sending a telegram of protest to President Roosevelt.

Scientific Session activities enclosed.

Fulton

County Society Opposed to County Unit. At its annual meeting at Gloversville on December 20, 1934, the Fulton County Society adopted the following formal resolutions:

WHEREAS, The State Department of Health has established a Bi-County Health Unit comprising the counties of Montgomery and Fulton which has no definite plan and has been admitted by representatives of the State Department of Health to be a purely experimental procedure, and

WHEREAS, We believe such a movement in itself is an additional step toward State Medicine, and

WHEREAS, We believe such an experiment on the part of the State Department of Health is contrary to the principles of the American Medical Association. Therefore, be it

Resolved, That the Fulton County Medical Society regularly assembled in its annual meeting at Gloversville, on December 20, 1934, go on record as being unanimously opposed to the above program.

Genesee

The Annual Meeting of the Genesee County Medical Society was held on October 25, 1934, at East Pembroke. The following officers were elected: President, Charles D. Graney, Le Roy; Vice-President, Charles L. Davis, Batavia; Secretary-Treasurer, Peter J. Di Natale, Batavia; Delegate to State Society, Peter J. Di Natale.

Dr. Graney named the following committees: Public Health: Chairman, H. M. Spofford, Batavia; R. Frazier, Bergen; M. P. Messinger, Oakfield. Legislation: Chairman, P. J. Di Natale, C. D. Graney, R. G. Wilson. Physiotherapy: T. M. Steele, Le Roy. Medical Economics: Chairman, S. R. Hare,

Batavia; L. B. Manchester, Batavia; P. J. Di Natale, Batavia. Program: Chairman, P. J. Di Natale, S. R. Hare, C. L. Davis. Public Relations: Chairman, G. H. Knoll, Le Roy; C. D. Pierce, Batavia; C. C. Koester, Batavia. Membership: Chairman, W. B. Manchester, I. A. Cole, E. N. Morgan.

Rockland

Annual Meeting. On December 5, 1934, the Society held its annual meeting in time honored fashion as a "dinner meeting" at the Villa Lafayette, Spring Valley. These officers were re-elected: Dr. George M. Richards of Stony Point, as President; Dr. Alexander N. Selman, Vice-president; Dr. William J. Ryan, Secretary; Dr. Dean Miltimore, Treasurer; Dr. Royal Sengstacken of Suffern, Chairman of the Committee on Public Health; Dr. J. W. Eiles, Chairman of the Committee on Membership; Dr. Charles D. Hine, Chairman of the Committee on Legislation; Dr. Leo Weishar, Chairman of the Committee on Physical Therapy.

During the evening, A. Longfellow Fiske, radio speaker, gave an interesting talk on social problems. Knight McGregor sang several vocal selections. The meeting was, as usual, very well attended.

Seneca

The regular annual meeting of the Seneca County Medical Society was held October 11, 1934, at the Willard State Hospital. The meeting was called to order at 11:00 A.M. by the President, Dr. John F. Crosby of Seneca Falls. The following officers were elected for the ensuing year: President, Dr. E. M. Wellbery, Waterloo; Vice-president, Dr. Joseph E. Allen, Seneca Falls; Secretary-Treasurer, Dr. F. W. Lester, Seneca Falls; Censors, Drs. C. B. Bacon, Bel lows and Lester; Delegate to State Society, Dr. John F. Crosby; Alternate, Dr. L. Arthur Guild, Interlaken; Delegate to 7th District Branch, Dr. James M. Murphy, Waterloo; Medical Economics Committee, Drs. Edward M. Wellbery and F. W. Lester; Public Relations Committee, Drs. L. W. Bellows, E. M. Wellbery and J. E. Allen; Legislative Committee, Dr. F. W. Lester.

At 12:30 P.M., by invitation of Dr. Robert M. Elliott, Superintendent of the Willard State Hospital, the Society was entertained at dinner. At 2:00 P.M. the Society reconvened for the Scientific Session: Dr. Thomas P. Farmer, Syracuse, spoke on "The Treatment of Gynecological Conditions Met in General Practice." Dr. Farmer illustrated his talk with numerous lantern slides. In the discussion, led by Dr. Adrian C. Taylor of the Clifton Springs Sanitarium, many important comments were made. The paper of Dr. Farmer and the discussion following

it, which then became general, were well received by the Society.

"Classifications of Mental Disorders" was the subject of a paper by Dr. Ross E. Herold of the Staff at Willard State Hospital. This instructive paper was discussed by Dr. Herbert C. Burgess of Brigham Hall Hospital, Canandaigua.

After a rising vote of thanks to the host, to the speakers, and to the guests, for their excellent literary program, the Society adjourned.

Westchester

Fee Schedule of TERA Disapproved. At its annual meeting on November 20, 1934, the County Society adopted the following resolutions:

WHEREAS, The T.E.R.A. of New York State has issued a schedule of fees as the basis of reimbursement to the townships of the State for home relief; and

WHEREAS, This fee schedule has become in effect an arbitrary schedule of fees used by the town and county officials in Westchester County for the payment of all branches of the medical profession; and

WHEREAS, There is no evidence that the organized medical profession was consulted in the determining of these fees; and

WHEREAS, These fees, are for this county, in some instances absurd, and clearly inadequate to attract the willing services of the more competent physicians; and

WHEREAS, A subsequent development of welfare work has added State Employee compensation cases to the ordinary relief cases at similar fees, in subversion of the original intent of the act and with dangerous effect on the entire scheme of private compensation payment; therefore, by the Medical Society of the County of Westchester at its annual meeting in White Plains, on November 20, 1934, be it

Resolved, That the County Society disapproves the fee schedule of the Temporary Emergency Relief Administration and refuses to accept it as a permanent basis of payment to the medical profession of Westchester County and that in its opinion the members of the medical profession should continue to operate under it only under protest and only until a satisfactory fee schedule shall be adopted by the County and Town welfare officials; and be it further

Resolved, That the present arrangements whereby medical fees for services rendered injured employees of work relief agencies are paid out of welfare funds and the present schedule of fees paid for these services, shall be and hereby are strenuously protested as unsound and unfair arrangements; and be it further

Resolved, That copies of these resolutions be sent to the officers of the T.E.R.A., the County Supervisors, the Commissioner of Public Welfare of the County, the various local Welfare Officers of the County, and that they be furnished to the local press and that they be published in the *Westchester Medical Bulletin* for transmission to the State Society and to other County Societies and interested persons.

IT'S ALL IN THE DAY'S WORK

Georgia doctors are discussing an amazing operation performed by one of their number a few weeks ago in saving the life of a young man at the F.E.R.A. transient bureau in Atlanta. Dr. L. Minor Blackford really saved the young man's life twice, once at the risk of his own. The doctor refused to say anything about it, but his friends told the story and it is printed in the *Journal of the Medical Association of Georgia*, quoted from the *Atlanta Constitution*. It seems that the physician was called to the bureau to attend Herbert Conner, 28, ill with abscessed tonsils. He went without equipment and found Conner near death from lack of breath, the swollen tonsils closing the air from his lungs.

Working alone in a dimly lighted attic, Dr. Blackford used only his pocket knife to slit a hole on the youth's throat in order that air might enter the lungs. He then held the incision open with his hands and had an untrained man administer heart and respiration stimulants. Soon the air began to enter the lungs but as Conner was bleeding freely from the incision the blood also was entering the lungs as well as the air.

Then Dr. Blackford and his helper got an ordinary rubber tube which he sent down Conner's windpipe to the lungs and through this pipe the doctor himself sucked the blood from the patient's lungs.

After a long time the youth began to breathe

comfortably and the surgeon dressed his wound and put him to sleep.

The patient was reported to be doing well Thursday, as Dr. Blackford was receiving the plaudits of his profession, and he smoked a cigaret, blowing the smoke through the tube in his throat.

"I might have sucked the blood from the lung of someone near to me but it is only one man in a million who would have done what Dr. Blackford did and risk the chance of dangerous infection and possible death to himself," a prominent physician and surgeon said in discussing the exploit.

He had just hung up his shingle. That morning a stranger entered. The doctor asked to be excused as he hurried to the phone.

Taking down the receiver he said: "Yes, this is Dr. Whoosit. Yes, I will be ready for you at two-ten this afternoon. But please be prompt for I am very busy. Two hundred dollars? Yes, that was the estimate I gave you."

Hanging up the receiver he turned to the stranger, and rubbing his hands, asked: "Now, sir, what can I do for you?"

"Nothing," replied the stranger, quietly. "I only came in to connect the telephone."—*Thomas Topics.*

Medicolegal

LORENZ J. BROSNAN, ESQ.

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Physicians—Liability for Acts of Substitute Physicians

It happens at times in obstetrical cases that the physician who has been engaged in the case by reason of some unforeseen event is unable personally to be present at the actual delivery. Under the circumstances the doctor will, of course, provide another competent physician to deliver the patient.

An interesting case passing upon the responsibility of the first physician for the acts of the substitute physician is found in a case in one of the Southern States.*

In the case under consideration the facts were as follows: A certain Dr. M had agreed to deliver the plaintiff and had examined her at regular intervals. Shortly before the time when the woman was expected to deliver, Dr. M had a case in which he was defended coming up on the calendar. On the morning in question he saw and examined the plaintiff about 6:00 A.M. The reported case does not state what the woman's condition was at that time. By reason of the fact that Dr. M's actual appearance was required in court some distance from the home of the patient, he concluded that he would not be able to revisit the patient on the same day. The testimony in the case showed that it had long been the custom among reputable physicians in that locality where Dr. M practiced for a physician who was unable to meet all his professional engagements to send in this emergency another competent physician.

In accordance with that custom Dr. M communicated with one Dr. H, a competent physician in the field of obstetrics, and explained the situation, and Dr. H agreed to take the case over. In a telephone conversation with the husband of the patient Dr. M explained the situation to him and the husband agreed to accept the services of Dr. H. In the course of the conversation between the two physicians mention was made of Dr. M referring to the case as a partnership case. The mean-

ing of this is not very clear for the reason that there was no existing partnership between Dr. M and Dr. H. One was not in the employ of the other, but we mention this fact because it is later commented on by the court.

In pursuance of the arrangement previously referred to, Dr. H went to the home of the patient and delivered the child.

Thereafter, the patient commenced an action against Dr. M claiming that he was responsible for some alleged negligent acts on the part of Dr. H, the substitute physician who actually did the delivery. The nature of the charges is not disclosed in the opinion. Upon the trial the court charged the jury that "the law required the exercise of ordinary care by Dr. M in his personal attention to Mrs. L and also required the exercise of ordinary care by Dr. M in the selection of another physician for her."

There was no proof in the case that Dr. H, the substitute physician, was lacking in those qualifications necessary to treat the case. The court was requested to charge by the plaintiff that any negligence or lack of skill on the part of Dr. H resulting in injury to the plaintiff was chargeable to Dr. M regardless of the care exercised by Dr. M in selecting Dr. H. The jury returned a verdict in favor of Dr. M from which the plaintiff appealed to the Court of Civil Appeals, claiming that the Trial Court was in error in refusing to charge as above stated and for that reason the verdict should be set aside and a new trial granted.

In the first Appellate Court the contention of the plaintiff was sustained and the court squarely held that Dr. M was responsible for the acts of Dr. H. From this ruling the doctor appealed to the Supreme Court of the State where the judgment of the first Appellate Court was reversed and the jury verdict reinstated.

In discussing the situation presented by the facts of the case, the court said:

* Lee vs. More, 211 Southwestern Repts. No. 365.

It is immaterial to the matter of Dr. M's liability for Dr. H's negligence or want of skill under the issues joined here whether Dr. M represented Dr. H to be his partner at the time he proposed sending him. No pleading was filed by the plaintiff alleging that Dr. H was held out to be the partner of Dr. M, nor seeking to hold Dr. M liable as a partner with Dr. H, nor seeking to recover any damages for any misrepresentation of Dr. H's status as a partner. So the question is simply: What was Dr. M's duty, under the law, when plaintiff's husband asked him to speedily dispatch another physician to treat Mrs. L. To our minds this question admits of no answer save the duty of Dr. M to exercise ordinary care in the selection of the physician to be sent, as the jury was instructed by the Trial Court.

The case was clearly decided correctly. It should be noted that there was no claim of abandonment in the case and that concededly the husband of the plaintiff had acquiesced in the arrangements made. The two physicians were clearly independent contractors. There existed between them no partnership. It was not claimed that one was in the employ of the other and there was no sufficient evidence indicating any partnership so far as the handling of the case was concerned. The facts as presented by the record revealed a situation where the legal principle of independent contractors is clearly applicable. This principle makes each physician responsible for his own acts but not for the acts of another physician who takes over the case with the consent and acquiescence of the patient.

Amputation of Leg Following Laceration of Knee

A doctor engaged in general practice of medicine was consulted with respect to certain laceration of the right knee which was sustained by a sixteen-year-old boy. The father gave the history that the boy had been wrestling in a field with some other boy and had fallen on a broken bottle, cutting the knee.

The doctor examined the knee and found that the knee-joint was open through the capsule, the laceration being about 3 inches long. The boy was generally in a filthy condition, with dirty trousers, and the wound at the time was bound up with a dirty handkerchief. Doctor told the boy's father that he should immediately be removed to a hospital but the father refused, saying that he could not afford the expense. The doctor then painted the leg with iodine

and took two stitches on each side of the laceration and inserted a drain into the joint. He attended the boy at his home for several days, upon each of which occasions he applied wet dressings of Dakins solution.

On each of these occasions he advised that the boy should be put in a hospital in order that he might receive suitable treatment. The leg did not improve and on the fifth day the doctor, assisted by another physician who gave an anesthesia, opened the wound and applied new dressings. Two days later, the patient not having improved, was finally taken to a hospital where he was attended by the doctor originally consulted and another physician. The boy remained in the hospital under the care of the two doctors and an infection developed which required curetment on two occasions.

After the boy had been in the hospital for about a month, a consultation was held with another surgeon in which was decided the necessity to amputate the patient's leg about seven inches below the hip joint. Shortly after the amputation the first doctor was discharged from further responsibility.

Some time later a malpractice action was instituted against this doctor charging that it was owing to his negligence that the patient's leg had been amputated. The plaintiff's case proceeded on the theory that the defendant had negligently permitted an infection to develop, which caused blood poisoning and required the amputation. In particular it was contended that on the occasion of the first visit the defendant had neither sterilized nor cauterized the wound.

The case came to trial before a judge and jury and at the end of three days was sent to the jury. A verdict was rendered by the jury in favor of the defendant, exonerating him from the charge of malpractice.

Alleged Improper Anesthetization

In this case the doctor, a general practitioner, was called to the office of his neighbor, a chiropodist, and was asked by the chiropodist to examine the toe of a boy at that time about 16 years of age. Examination by the doctor indicated that the boy was suffering from an ingrown toe nail and that the toe in the region of the nail was swollen and tender. After completing

his examination the doctor told the chiropodist that in his opinion any operative treatment to the ingrown nail should be deferred until the swelling and inflammation had subsided. The doctor thereupon left the office of the chiropodist and heard no more about the case until approximately one week later, when he was called in again and requested by the chiropodist to examine the toe.

The doctor on his examination at this time found that the infection had subsided and that the toe was in such a condition as could safely be operated. In the presence of the doctor the chiropodist thereupon instructed the boy to tell his parents that the toe was now in a condition to have the offending portion of the nail removed, and the following day was set for the operation, contingent, however, upon the approval of the boy's parents.

The next day the doctor was advised by the chiropodist that the boy had returned for the purpose of having the offending portion of the ingrown nail removed, and on that day the chiropodist prepared the boy's foot by washing it with germicidal soap and warm water, drying it with a sterilized towel, and painting the area around the toe with iodine and ether, and then covered the foot with the exception of that part to be operated by a sterile towel. When this had been done the doctor boiled a hypodermic needle for about twenty minutes, inserting it into a syringe and injecting 2 per cent novocaine into the sides of the toe until the toe was anesthetized, but not in the region of the original inflammation. Then the chiropodist removed the offending portion of the nail which had been growing into the toe, placed a sterile bandage on the foot and instructed the boy to return the following day for examination and postoperative treatment.

The following day the doctor received a telephone call from the parents requesting him to come to their home and see the boy. When he arrived there he found the boy in bed complaining of pain with slight swelling of the foot and lower part of the leg. He advised continuous applications of wet dressings of Dakin's solution and told the family that he would return the following day. The doctor returned each day for the next three days and examination on each occasion found that the swelling and tenderness still persisted. He instructed the parents to con-

tinue the application of wet dressings. When, however, the doctor returned the following day and found the condition to be worse he immediately called in a well-known surgeon who, after examining the boy, placed him in a local hospital and thereafter treated him. The surgeon who was called in diagnosed the case as cellulitis and treated him in a hospital with continuous application of wet dressings.

The boy remained in the hospital for about a week at which time the condition had subsided considerably and he was discharged but still remained in the care of the surgeon. About ten days later he was re-admitted to the hospital and an examination at that time disclosed several areas of redness on the left leg in the region of the ankle, together with an abscess on the outer side of the leg. Incision and drainage was instituted and the patient remained in the hospital for approximately three weeks. On the occasion of his discharge from the hospital the cellulitis had disappeared and some time later when the nail again started to grow into the toe he was taken to the hospital and the whole nail was removed.

Thereafter, an action was instituted by the father of the boy, as guardian ad litem, against both the chiropodist and the first doctor. The claim substantially against the doctor was that he injected novocaine into an infected area. The contention of the doctor in the defense of this claim was that he had waited until in his opinion the inflammation and infection had subsided and that the injections he gave were at the base of the nail and nowhere near the site of the original inflammation.

On the first trial the jury after deliberating for approximately six hours reported to the court that they were unable to agree on a verdict and thereupon the court discharged them.

A few months later the case was re-tried and the same claims were advanced by the plaintiff. At the close of the plaintiff's case the court granted a motion made on behalf of the chiropodist to dismiss the complaint as to him because, said the court, there had been no testimony that anything the chiropodist did was indicative of negligence. The case with respect to the doctor was submitted to the jury for their deliberation and after a short consideration of the case they returned a verdict in favor of the defendant.

Counterclaim of Malpractice

In this case the doctor was called to the home of the patient where he found the patient in bed very ill.

The doctor examined the patient and made a diagnosis of pulmonary edema and a myocarditis. He saw him approximately five times for this condition, treating him with hypodermic injections of morphine, atropine, and strychnine. When, however, his condition did not improve after about ten days the doctor advised hospitalization. The patient consented and was taken to a private hospital where he remained for a period of about two months. The treatment administered to him by the doctor during this period of time was complete rest, hypodermics, and regulation of his diet. The doctor saw him approximately every day during his hospitalization and his condition improved to the extent that he was able to return home.

The doctor was thereupon advised by the daughter of the patient that her father had another doctor and would no longer

require his services. The doctor thereupon sent bills to his patient for some time but they never were paid and he finally turned the matter over to a collection agency which brought suit on behalf of the doctor for the unpaid bill.

In answer to this suit the patient interposed a counterclaim in which he charged that the defendant had been guilty of malpractice in the care of the case and demanding the sum of \$1,000 as damages. The precise nature of the patient's claim of malpractice was never learned for it was not specified in the pleadings and at the time the case was reached for trial neither the patient nor his attorney appeared to contest the doctor's claim and the court thereupon dismissed the counterclaim of malpractice and granted the doctor judgment for the amount sued.

It was obvious that the claim of malpractice had been merely inserted into the case for the purpose of delay and for the purpose of attempting to cause the doctor to abandon his suit to recover for his fee for professional services.

THE UNKINDEST CUT OF ALL

While the government's delegated alphabet committees are avowedly striving to raise the cost of everything that the consumer must buy, there is one outstanding exception, notes the *Journal-Lancet*, of Minneapolis. The manufacturer, wholesaler, and retailer in every line of industry is protected by price-fixing codes and anti-chiseling regulations that establish inescapable prices for their goods. The one exception is the physician.

Public relief must, of necessity, contemplate the payment of these established and so-called fair prices by agencies that furnish food, shelter, and raiment in order to fit in with the program of national rehabilitation. When it comes to the physician, however, he is asked to take a cut. It is reported that the contact officers who are organizing medical relief units in the various states have suggested a 30 per cent and in some cases a 50 per cent discount of that which was

previously set up and conceded to be a reasonable fee schedule. The President has already made a basic commitment to "operation for profit." How does this pronouncement fit in with the attitude toward our profession when it is generally conceded that the operating expenses of a medical practice in the first place is 50 per cent of gross and in times like these even 70 per cent? The war department comes along with a request that members of the medical profession give physical examinations, inoculations and vaccinations to C.M.T.C. candidates without any charge whatever, so that does not answer the question. It has become a habit to expect it.

We're a patriotic bunch, all right, and willing to go the limit in assisting our government and our fellow men but it appears that our material needs are often forgotten. It is altogether too complimentary to assume that the medical profession alone can live on adulation.

A DEAD-LINE ON DEADBEATS

More and more county medical societies are establishing bureaus for listing habitual deadbeats, along lines similar to those employed by the Wichita (Kansas) Medical Credit Bureau, which is maintained by the Sedgwick County Medical Society, states the county's *Medical Bulletin*.

Physicians of Washington, Iowa, recently an-

nounced in the local press that they are keeping up to date a confidential listing of patients who are known to have the habit of switching doctors to escape paying their bills.

Some 6,000 names are now on file in the executive office of the S.C.M.S. Members are urged to make use of the information in these files.

Books

BOOKS RECEIVED

[Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Essentials of Histology Descriptive and Practical for the Use of Students—By Sir I. Sharpey Schafer. Thirtieth Edition. Edited by H. M. Cleeton. B. Sc. Octavo of 618 pages illustrated. Philadelphia: Lea & Febiger, 1934. Cloth \$5.00.

A Text Book of Histology Functional Significance of Cells and Intercellular Substances—By I. V. Cowdry. Octavo of 503 pages illustrated. Philadelphia: Lea & Febiger, 1934. Cloth \$5.50.

The Anatomy of Surgical Approaches—By I. C. Kellogg. M.D. 12mo of 134 pages illustrated. Baltimore: William Wood & Company, 1934. Cloth, \$1.50.

Physical Diagnosis—By Richard C. Cabot, M.D. Eleventh Edition. Octavo of 540 pages illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$5.00.

Electrocardiography—By Chauncey C. Maher. M.D. Octavo of 250 pages illustrated. Baltimore, William Wood & Company, 1934. Cloth \$4.00.

A Text Book of Medical Psychology—By Ernst Kretschmer, M.D. Translated by I. B. Strauss. M.D. Octavo of 274 pages illustrated. New York: Oxford University Press, 1934.

Applied Anatomy—By Gwylm G. Davis, M.D. Ninth Edition. Edited by Geo. P. Muller, M.D. et al. Quarto of 717 pages illustrated. Philadelphia, J. B. Lippincott [c. 1934]. Cloth \$9.00.

Mortality Among Patients With Mental Disease—By Benjamin Malisberg. Phi D. Octavo of 234 pages. Utica, N. Y., State Hospitals Press, 1934.

Allergy and Applied Immunology—By Warren T. Vaughan. M.D. Second Edition. Octavo of 420 pages illustrated. St. Louis, C. V. Mosby Co., 1934. Cloth \$5.00.

Diabetic Manual for Patients—By Henry J. Jolin, M.D. Second Edition. Duodecimo of 232 pages. St. Louis, C. V. Mosby, 1934. Cloth \$2.00.

Synopsis of Genitourinary Diseases—By Austin I. Dodson, M.D. Duodecimo of 275 pages illustrated. St. Louis, C. V. Mosby, 1934. Cloth, \$3.00.

Rules for Recovery from Tuberculosis—By Lawson Brown, M.D. Sixth Edition, Revised. Sexdecimo of 275 pages. Philadelphia, Lea & Febiger, 1934. Cloth \$1.75.

Cataract. Its Etiology and Treatment—By Clyde A. Clapp. M.D. Octavo of 254 pages illustrated.

Philadelphia Lea & Febiger, 1934. Cloth \$4.00.
Sex Hygiene What to Teach and How to Teach It—By Alfred Worcester. M.D. Octavo of 134 pages. Springfield, Charles C. Thomas [c. 1934]. Cloth, \$2.50.

Hygiene for Freshmen—By Alfred Worcester, M.D. Octavo of 151 pages. Springfield, Charles C. Thomas [c. 1934]. Cloth \$1.50.

Institutional Care of Mental Patients in the United States—By John Maurice Grimes. M.D. Octavo of 138 pages. Chicago, J. M. Grimes [c. 1934]. Cloth, \$3.00.

An Activity Analysis of Nursing—By Ethel Johns, R.N. and Blanche Pfefferkorn, R.N. Duodecimo of 214 pages. New York, Committee on the Grading of Nursing Schools, 1934. Cloth \$2.00.

Nursing Schools Today and Tomorrow—Final Report of the Committee on the Grading of Nursing Schools. Duodecimo of 268 pages. New York: Committee on the Grading of Nursing Schools, 1934. Cloth \$2.00.

A Manual of the Practice of Medicine—Prepared especially for students. By A. A. Stevens. M.D. Thirteenth Edition. Revised. Duodecimo of 685 pages. Philadelphia: W. B. Saunders, 1934. Cloth, \$3.50.

Practical Obstetrics for Students and Practitioners—By P. Brooke Bland. M.D. and Thaddeus L. Montgomery, M.D. Second Edition. Octavo of 730 pages illustrated. Philadelphia, F. A. Davis Company, 1934. Cloth, \$8.00.

The Patient and the Weather—By Wm. F. Petersen. M.D. assisted by Margaret F. Milliken. S.M. Volume III. Mental and Nervous Diseases. Quarto of 375 pages illustrated. Lithoprinted. Ann Arbor, Edwards Brothers, 1934.

The Jew in Science—By Louis Gershenfeld. Duodecimo of 224 pages. [Philadelphia: Jewish Publication Society of America, 1934. Cloth, \$2.75.]

The B. C. G. Vaccine—By A. Neville Irvine. Octavo of 66 pages. London, Oxford University Press, 1934. Cloth, \$1.75.

Gynecology—By Brooke M. Ansbach. M.D. Fifth Edition, revised. Octavo of 832 pages illustrated. Philadelphia: J. B. Lippincott [c. 1934]. Cloth \$9.00.

The Life of Sir Robert Jones—By Frederick Watson. Octavo of 327 pages illustrated. Baltimore, William Wood & Company, 1934. Cloth \$3.75.

BOOKS REVIEWED

Sculpture in the Living Rebuilding the Face and Form by Plastic Surgery—By Jacques W. Maliniak, M.D. Octavo of 203 pages illustrated. New York: Lancet Press, 1934. Cloth \$3.00.

This book of Dr. Maliniak's does not confine itself to purely cosmetic questions. It covers the entire range of disfigurement from its functional as well as esthetic aspects. It is concerned with many commonly encountered psychic phenomena and appraises the factor of disfigurement in social maladjustment and economic failure and evaluates potentialities of corrective surgery as an aid to the mental and economic rehabilitation of the disfigured.

Plastic surgery is presented to the physician and to those especially interested in the field of plastic surgery, and it also presents a strong appeal to the layman who is either subjectively or objectively interested. In a very easily comprehensible manner the indications for plastic repair are outlined and its limitations are given. Yet in no sense can this be termed a textbook for medical students or even for students of plastic surgery. Rather than this the book is a guide to the interested layman to show him what plastic surgery can do for him. Ordinarily indications for surgery are fixed upon definite findings. In plastic surgery and in also that part of it called cosmetic surgery the psychic and neurogenic elements which form a basis for indication sum up to a total which places the indications for plastic surgery in a very different category from the indications for operation as medical men are wont to recognize.

To the average physician, the book should be a fund of knowledge to place him in a position to advise his

or, hardly the last written statement published by the late Wendell C. Phillips. To quote him gives this book its endorsement. Phillips says: "The education of the public in medical questions has been an accepted principle of organized medicine for a number of years. In the case of plastic surgery, the comparative newness of this specialty and the absence of an authoritative national body for the consideration of its problems have conspired to keep the public in ignorance of the truth about surgical reconstruction and to leave the dissemination of publicity on the question in the hands of charlatans and dubious medical practitioners."

This book is charmingly written is very instructive, interesting as well as authoritative.

S. J. KOPFTZKY

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Vol 17, No 1, July, 1933

(New York Number)

The New York number of the *Medical Clinics of North America* for July, 1933 contains a noteworthy contribution by Cc.

the anatomy, the excellently illustrated carcinoma of the Mesentherial of case of spontaneous course of essential neoplasm of the

of the stomach and splenic flexure. Blumgarten discusses spontaneous hypoglycemias in endocrinopathies. This subject certainly requires further elucidation. Bullowa highly favors the use of avertin for the delirium in pneumonia.

An excellent discussion on skin tumors with special reference to precancerous dermatoses and the group of mycosis and related conditions was contributed by Highman. Mackie has a valuable contribution on non-tropical sprue with an excellent bibliography. Tenney and Goldstein discuss the mental symptoms of pernicious anemia and advocate the use of liver therapy for their relief.

Harkavy believes in a thorough investigation of the nasal sinuses for the treatment of persistent or return infections of the lung, urticaria, and asthma. Epstein speaks of favorable results with the use of gold tribromide in pertussis.

A splendid paper by Schwartz and Jezer on Stokes-Adams syndrome is the outstanding contribution. Discussion of the four different types and their respective treatments is given.

Winkelstein discusses the inter-relationships of abdominal symptoms and coronary artery disease and the differential diagnosis between thoracic and abdominal conditions in the angina syndrome. Friedenson's discussion of diuretics in advanced cardiac insufficiency is important.

An excellent contribution from Beth Israel Hospital by Weiss, Grossman and Feinstein discusses the differential diagnosis of hypertension, particularly with reference to surgical kidney pathology, nephritis, and nephrosclerosis. Goldbloom lays considerable stress on the diagnostic importance of blood volume and cardiac output studies in borderline cases of thyrotoxicosis, and splendidly illustrates this with a case of vegetative nervous imbalance.

Vol. 17, No. 2, September, 1933
(Chicago Number)

The September number of the *Medical Clinics of North America* contains a symposium on blood dyscrasias. The rationale of x-ray therapy in leukemia is excellently presented. Cases of agranulocytosis, streptococcus viridans sepsis without endocarditis and accompanied by aplastic anemic blood picture, and acute leukemia are presented by Tice. Hemophilia, polycythemia and aplastic anemia, anemias of gastro-intestinal origin are discussed by other contributors.

Foley stresses the importance of cholecystography in jaundice and shows that a positive visualization of the gallbladder in the presence of jaundice speaks for intra-hepatic disease.

Cinchophen poisoning is thoroughly discussed clinically and pathologically by Carroll. The reviewer is happy to note that his own observations on cinchophen poisoning have been amply corroborated by these careful observers.

Other contributions include tuberculides of the skin, the acidotic diet treatment of chronic urinary infections, and the treatment of coronary thrombosis by oxygen inhalation.

Vol. 17, No. 3, November, 1933
(Philadelphia Number)

Among the contents of the Philadelphia number of the *Medical Clinics of North America* is an excellent description of the encephalitis epidemic of St. Louis, 1933. Pituitary endocrine disturbances, periarteritis nodosa, and coronary thrombosis simulating acute surgical abdomen are also well expounded.

Of great interest is the discussion of aleukemic reticulosis, Dr. Myer Solis-Cohen's stressing the value of quinine in large doses in pneumonias of infancy and childhood, and an account of the unusual condition of ocular pemphigus.

The number as a whole is an exceedingly good one from the point of view of the general practitioner, and there are some sound discussions on hemolytic jaundice, the anemias, multiple sclerosis, relationship of psychology to medicine, basal lung tuberculosis, hyperthyroidism, hypertensive encephalopathy, and congenital heart block.

Vol. 17, No. 4, January, 1934
(Cleveland Clinic Number)

The Cleveland Clinic number contains many satisfactory articles. Haden discusses the clinical factors in the production of anemia and their treatment. He also gives a differential diagnosis of chronic hypertrophic and chronic atrophic arthritis, outlines a form of study and treatment in these conditions. Hartsock stresses the investigation and treatment of gastro-intestinal and nutritional factors in the treatment of chronic atrophic arthritis. Ernestine mentions that cardiac manifestations may be the first evidence of hyperthyroidism, discusses the use of quinidine in auricular fibrillation, the importance of rapid digitalization in severe heart failure after thyroid removal, and stresses that hyperthyroidism is not the sole cause of the cardiac state in hyperthyroidism.

Tucker discusses the management of the parathyroid tetany and its clinical phases, including the use of very large doses of calcium. McCullagh discusses hypogonadism in the adult male following bilateral herniorrhaphy and gives a differential diagnosis from hypothyroidism. He mentions improvement with the use of Androline, a comb growing promoting substance from male urine. John discusses spontaneous hyperinsulinism and gives his reasons, with an illustrated case, for the use of low carbohydrate with high fat diet together with 10 units of insulin a half hour after meals. In the discussion of diabetes, he insists on determinations of the blood sugar three times daily before meals for the intelligent adjustment of both diet and insulin.

Netherton advises the use of sodium thiosulphate, large doses of adrenalin, and hypertonic glucose for the treatment of neosalvarsan encephalitis. Ruedemann's article on the ocular muscles is well worth while reading. The proper study, differential diagnosis and treatment of neurosis of the digestive tract are discussed by Hartsock. The importance of esophagoscopy in the early recognition of carcinoma of the esophagus is stressed by Collins.

Tucker gives some observations on chronic ulcerative colitis and mentions the use of malt extract, codliver oil, yeast extract, iodine, autogenous vaccine, and ileostomy. The various causes of non-nephritic albuminuria are given, and the clinical types of Bright's disease are discussed by McDonald. Particular stress is laid on the urea clearance test as a prognostic sign. Nichols and Shiffert emphasize the importance of proper x-ray studies for the diagnosis of renal tumors, especially in the absence of urinary symptoms. Netherton shows some splendid results with the use of intravenous injections of typhoid vaccine in tinea sycois.

Vol. 17, No. 5, March, 1934
(New York Number)

The March number of the *Medical Clinics of North America* contains a clinic of three cardiac cases by Brooks, several papers on hyper- and hypothyroidism, tests of renal function, diet and anemia in Bright's disease, a paper by Bela Schick on abnormal nutritional states in children and an excellent discussion by W. C. Phillips on problems in impaired hearing.

There is a thorough discussion of perforated peptic ulcer and its differential diagnosis by I. W. Held and A. A. Goldbloom. The significance of salt in the treatment of Addison's disease, dehydration and medical shock is noteworthy. A very stimulating paper is the one on angiospastic diathesis by L. Lichtwitz.

The number ends with a symposium on diseases of the peripheral vascular system with a discussion of the diagnosis, medical and surgical treatment, arteriography, apparatus and technic for the study of these diseases.

M. A. RABINOWITZ

Vol. 17, No. 6, May, 1934
(Index Number)

Sloan discusses temporal tumors, giving as symptoms, "smelling bad odors," dream states, convulsive seizures, uncinete attacks, disturbances in taste, deafness, visual field defects, hemiparesis, cerebellar signs, and ipsilateral dilatation of the pupil.

Brawley mentions eye irritations due to hair dyes, mascara, perfume, cold creams, astringents and lotions. Dermatitis due to the use of aniline dyes may cause a reaction as early as two hours or as late as twelve days. DeTakats advises a test with ergot in juvenile diabetes and states that if the galactose tolerance curve is significantly depressed, then bilateral splanchnic section is indicated in severe cases in the young.

Meyer describes a case of Papet's disease of thirteen years duration without any deformities. Coogan reports pulsus bigeminus in healthy individuals under emotional strain, temporarily restored to normal by atropine, and permanently restored to normal after the end of the emotional strain.

Keeton mentions that some cases of Parkinsonism have associated hyperthyroidism. He stresses the fact that a hyperthyroid patient should not lose weight on a diet containing an excess of 15 per cent above the basal caloric need.

Portis discusses the preoperative laboratory examinations in gallbladder disease, as well as preoperative and postoperative care.

Coggeshall reports a case of malignant neutropenia where x-ray gave a temporary high leukocytosis, but he believes that increase of leukocytes after x-ray does not always mean a good result and may be followed by fatal outcome.

Heinz gives an excellent differential diagnosis between sigmoid carcinoma and diverticulitis. Ricketts adds five cases of toxic necrosis of the liver due to cinchophen, to the already voluminous literature. He substantiates all the findings and repeats the warnings made by the reviewer in the *Medical Clinics of North America* for January, 1929, and in subsequent papers.

M. A. RABINOWITZ

VEGETATIVE DISTURBANCES OF CEREBRAL ORIGIN

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The autonomic nervous system with its two subdivisions, the sympathetic and parasympathetic, was until recent years considered to be somewhat restricted in its functions. It was thought, as its name suggests, that it provided for functional independence or autonomy of the several vital internal structures of the organism. Of late, however, it has become obvious that its influence is much wider and more important. It provides a mechanism for orderly and co-ordinate actions of the internal organs such as the viscera, glands of internal and external secretion, the vascular, respiratory, genital, and muscular systems. Evidence is also accumulating to show that it contributes to the orderly action of the skeletal muscles. In this fashion the assimilative and eliminative processes, cardiovascular, respiratory, and other similar mechanisms, as well as the voluntary muscle function, are synergized and synchronized to be readily mobilized for adjustment to changes in internal and external environment.

The regulating influence of the autonomic nervous system, particularly over the so called vegetative processes, is obviously essential to the balanced life of the organism. It is because of this feature that the autonomic system with its central and peripheral portions came to be known as the *vegetative nervous system*. Thus, the modifying term *vegetative* is applied to that part of the nervous system which regulates the organs concerned with the secretion and excretion as well as the motility or contractibility of the various viscera. Hence, all functions of the organs and structures under the control of this system (possibly including muscle tone also) are rightly designated as *vegetative*.

The normal vegetative functions are, therefore, those which maintain continuity of the orderly life of the organism. They include the metabolic, contractile, secretory, and excretory activities. Many of these activities under certain conditions are carried out independently by the respective organs under the direct control of the intrinsic or peripheral portions of the autonomic nervous system. The co-ordination of such activities is, however, supervised by nerve centers in various parts of the supersegmental system. It is in the supersegmental system that we find the higher regulating vegetative mechanisms, and, as we pass from the medulla through the pons and midbrain and enter the *diencephalon*, we reach a small segregated area in which is situated a centralized series of co-ordinating vegetative nuclei.

THE DIENCEPHALON

The *diencephalon*, also known as the *interbrain*, is established early in the development of the central nervous system as a distinct subdivision (See Fig 1). A glance at the accompanying diagram will show the crucial location it occupies in the fully developed brain (See Fig 2). It will be seen that it is at the cross roads between the *telencephalon*, the most recently developed part of the central nervous system, and its more ancient parts—the lower portions of the brain stem and the spinal cord. In this location it holds a key position between the initiating and inhibiting centers in the cerebral cortex and lower subservient functional areas. In this fashion it brings the vegetative system in relation with the psychic zones of the brain on the one hand, and on the other, portions

of the brain in which reside simpler subordinate reflex centers.

The diencephalon includes among its

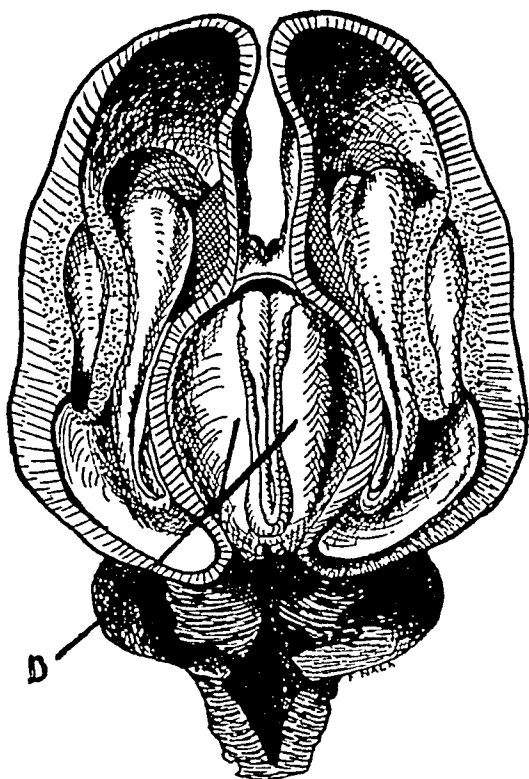


Fig. 1.—Drawing showing an early stage in the development of the diencephalon (D).

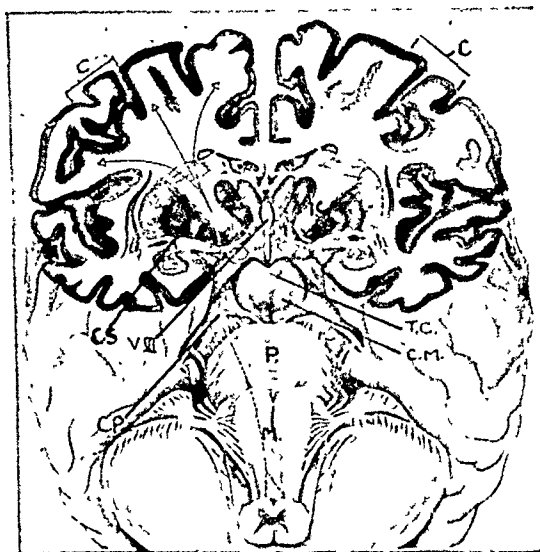


Fig. 2.—Drawing showing the location of the diencephalon in relation to other parts of the brain.

- T. C. Tuber cinereum
- C. M. Corpora mammillaria
- V. III. Third ventricle
- C. Cerebral cortex
- I. C. Internal capsule
- C. S. Corpus striatum
- C. P. Cerebral peduncle
- P. Pons
- M. Medulla oblongata

several parts the *hypothalamus* which is of particular interest here. The hypothalamus contains several circumscribed aggregations of cells, so-called *nuclei*, which include the nuclei of the tuber cinereum, the supra-optic nuclei, nuclei of the mammillary bodies, and the paraventricular nuclei. (See Fig. 3.) These nuclei were recently subgrouped into an *anterior subdivision* which includes the nuclei of the tuber cinereum and supraoptic nuclei and a *posterior subdivision* which consists of the paraventricular nuclei and those overlying the mammillary bodies. The anterior division is regarded as *parasympathetic* in function because of the relationship of its nuclei to the vagus and pelvic nerves which belong to the cranio-sacral (parasympathetic) outflow, while the posterior division is considered as a supersegmental center in the thoraco-lumbar outflow of the *autonomic* system.

Vegetative Dysfunctions. It is now fully accepted that lesions involving the diencephalon often result in vegetative dysfunctions, chief among which are disturbances in water balance; anomalous fat distribution; abnormal alterations in primary and secondary sex functions and morphology; disturbances in heat regulation, vasomotor mechanism, sleep, intestinal peristalsis, and appetite. While in the exceptional instance disease of the diencephalon may express itself in a single vegetative disturbance, it is more common to find that a disease, even when localized in the hypothalamus, is more apt to result in dysfunctions which may assume a variety of constellations of signs or symptoms or so-called syndromes.

ILLUSTRATIVE CASES

CASE 1. History.—A girl, aged six years, was apparently well until six months before admission to the hospital. She then became markedly constipated, slept poorly, was restless, lost her appetite and experienced constant thirst. The diagnosis of diabetes was made, and the child was treated accordingly. With the increase of thirst and increase of water intake, there was an increase in volume and frequency of urination. The child was losing strength and would frequently complain of fatigue; she gave up playing and became confined to bed.

Neurological Data. The child was undersized with a profuse growth of lanugo hairs all over her body. There was ptosis of the right eyelid and external strabismus of the right eye. The left pupil was larger than the right. Both pupils reacted to light and during accommodation. There was a left-sided hemiparesis.

Course and Anatomical Findings. The diag-

nosis of neoplasm involving the posterior lobe of the pituitary body encroaching upon the right crus cerebri was made. The patient was subjected to an exploratory craniotomy which was followed by death. At necropsy a cyst was found at the base of the brain. It covered the optic chiasm to which it was adherent and filled the entire interpeduncular space. (See Fig 4.) Its bulging inferior and exposed surface was prolonged into a funnel shaped process which seemed to be continuous with the pituitary body. The latter was extremely small in size, compressed and was lodged in a shallow and eroded sella turcica. The superior surface of this mass was firmly implanted in the substance of the brain, and the tuber cinereum and the mammillary bodies could not be identified since the floor of the third ventricle was stretched and flattened by the tumor mass.

Comment. The constellation of signs and symptoms of vegetative dysfunction in this case includes polydipsia, polyuria, retention of lanugo hair, asthenia, and obstipation. Of particular significance, however, are the manifestations of disturbed balance in water metabolism. The disruption of the floor of the third ventricle, caused by the craniopharyngioma, is in keeping with the belief that the region of the tuber cinereum is the seat of a regulating center for such vegetative functions.

CASE 2 History.—A boy, three and a half years old, was admitted to the hospital for the first time on December 29, 1930. At that time he suffered from headache over a period of three months and vomiting of one month's duration. More recently he became thirsty and would urinate frequently.

Neurological Data. Examination revealed hemiparesis with a positive Babinski sign, diminished abdominals on the right side, and in complete primary optic atrophy on the left side. X ray of the skull showed deformity of the sella with erosion and pointing of the posterior clinoids several small concretions in the sella and two small calcifications above the sella.

Course and Anatomical Findings. The patient was operated upon and a suprasellar, Rathke's pouch, cyst was found. The entire suprasellar portion of the tumor was removed. Following the operation the temperature rose to 106° F. It came down the following day, and the patient passed through a satisfactory convalescence. Following his return home there was still evidence of polydipsia and polyuria. He would take about ten glasses of fluid and voided an equal amount of urine. This gradually subsided and a note on December 7, 1930, a year later, read "The patient no longer has diabetes insipidus." The child was readmitted to the hospital on April 3, 1933, with a history of acute pain in the right ear which developed in the course of measles and was followed by the development of the picture of lateral sinus thrombosis. The internal jugular vein was ligated. The patient did not do well and died three days after admission to the hospital. Necropsy revealed a large cyst occupying the entire interpeduncular space. (See Fig 5.) It

extended beyond that space forward to the under surface of the cerebral hemispheres. It was adherent to the walls of the sella and at one point showed a defect.

Comment. This case again illustrates the occurrence of signs of diabetes insipidus in connection with lesions in the floor of the third ventricle. It is, however, still more significant because of the fact that

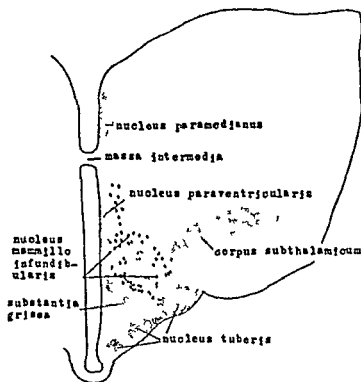


Fig. 3.—Drawing showing the distribution of some diencephalic nuclei (after Kuntz)



Fig. 4.—Ventral surface of the brain (Case 1) showing cystic tumor (craniopharyngioma) in the interpeduncular space—floor of the third ventricle

the signs of diabetes insipidus disappeared after the tumor was partially opened and pressure on the floor of the third ventricle was released. No less significant is the observation that with only partial removal of the tumor the patient was comfortable for a period of two years; and were it not

for the ear infection, it is quite possible that the patient would have continued to do well. It would seem that the less radical step in the case of craniopharyngeal cysts is a procedure of choice.

CASE 3. History.—A boy, ten and a half years of age, was seen but once in the Out-patient Department of the hospital. He was unusually obese with excessive fat about the hips, breasts, and genitalia. The formation of scrotum suggested that of the vulva. He gave the impression of Froehlich's syndrome. He was not seen again until he was brought to the hospital with a brief history and signs of acute appendicitis. An inflamed appendix was removed. Soon after operation he began to complain of headache and revealed a rigid neck.

Neurological Data. There was advanced bilateral papilledema with retinal hemorrhages. The blood pressure was 150 systolic and 115 diastolic. The patient was drowsy and at times stuporous. Roentgen-ray examination of the skull was unsatisfactory.

Course and Anatomical Findings. Because of manifestations of Froehlich's syndrome coupled with the papilledema, headache and advancing drowsiness, the diagnosis of a cerebral neoplasm, probably suprasellar in location, was made. At operation a cyst was encountered and was excised. The patient remained in good condition for several hours, but eight hours later his temperature rose abruptly to 105° F., dropped to 103.4° F., but rose again just preceding death which occurred seventy hours after operation. At necropsy the remains of the cyst were found. (See Fig. 6.) There was no gross surgical damage to the brain which could account for the elevation of temperature or the rapid death.

Comment. The abnormal obesity of the patient and the poor development of the secondary sex characters are a common finding with tumors in the floor of the third ventricle. It is also quite probable that hypertension present at this age in a boy who displayed other vegetative dysfunctions may also be traced to a lesion in this location. The sudden rise in temperature may find its explanation in the dislocation of the floor of the third ventricle as the result of the sudden collapse of the cyst. The above views are strengthened by the fact that the pituitary body was found to be normal.

CASE 4. History.—A man, 46 years of age, entered the hospital complaining mainly of failing vision during the past seven years. At adolescence it was noticed that his genitalia were rather small and that the left testicle was incompletely descended. His pubic and axillary hair was scanty, and its distribution was of the feminine type. His sex life was rather active until the age of 32. About this time and ten weeks after marriage, there appeared a decided decline in both libido and potency, and within one year he became totally and permanently im-



Fig. 5.—Ventral surface of the brain (Case 2), showing cystic tumor (craniopharyngioma) in the interpeduncular space (as in Fig. 4).



Fig. 6.—Ventral surface of the brain (Case 3), showing cystic tumor (craniopharyngioma) in the interpeduncular space (as in Fig. 4).

potent. Six years ago he noticed impairment of vision in the right eye which later became totally blind. During the past year and a half, vision in the left eye became impaired, too. With this there was occasional headache.

Neurological Data.—The patient was short and obese and hypopituitary in type. He had unusually small hands and feet, a protuberant abdomen, well developed female type breasts, marked scarcity of hair, and an absent left testicle. There was diminution of sense of smell on the right. His pupils were irregular and unequal (right larger than left); the right pupil reacted sluggishly to light. There was bilateral optic atrophy with total loss of vision of the right eye, and temporal loss of vision in the left.

Course and Anatomical Findings.—The diagnosis of pituitary neoplasm was made, and its removal was attempted. The pituitary region was exposed through a right frontal approach, and the surgeon removed part of the tumor. On completion of the operation the patient's temperature suddenly rose to 105° F., dropping the following day to 102° F. It rose again to 106° F. on the third postoperative day, shortly before death.

Comment: In this case the necropsy revealed a large tumor mass (see Fig. 7), part of which was removed by the surgeon. The tumor had elevated the floor of the third ventricle and, in so doing, had thinned it out, causing disruption of its structure. It is fair to assume that this dislocation of the floor of the third ventricle with the incident disruption of its structure was responsible for the vegetative dysfunctions in this case. The latter included: (1) disturbance in the development of the secondary sex characters, (2) the loss of potency, (3) abnormal distribution of fat and (4) the inadequate development of hair.

CASE 5 History.—A woman of 32, on entering the hospital, gave a history of intermittent headache, amenorrhea, sterility, obesity, impaired vision, and development of coarse facial features. Her menstruations began at the age of 15 and were regular until the age of 22. Soon after marriage, at the age of 22, her menstruation became at first irregular and scanty and, three months later, ceased completely and permanently. At the same time she began to gain considerable weight, so that in the course of the last ten years she has gained sixty pounds. There were no pregnancies. For the past two years she noted diminution of vision in the left eye. For some time she began to experience considerable thirst and would drink large quantities of water. During the past six days headache, which was at first intermittent, became very intense. Vision in the left eye became more impaired. Vomiting and drowsiness set in shortly before she was brought to the hospital.

Neurological Data. The patient was obese. There was convergent strabismus, diminished acuity of vision in the left eye, ptosis of the

left eyelid, exophthalmos on the left, right homonymous hemianopsia, and bilateral choked discs.

Course and Anatomical Findings. The objective findings supported by positive x-ray findings, which included enlargement of the sella turcica, irregularity of its floor, and destruction of the posterior clinoids, led to the diagnosis of pituitary tumor. At operation a large pituitary cyst was found. It ruptured, emptied about 40 c.c. of brownish fluid, and, as it collapsed, disappeared from view. Following the operation there was sudden rise of temperature. The patient declined slowly and died on the third day after operation. Necropsy disclosed a markedly disturbed hypothalamus. (See Fig. 8.)

Comment. In this case we have a situation very similar to that noted in the pre-



Fig. 7.—Extensive tumor at the base of the brain arising in the interpeduncular space (Case 4).



Fig. 8.—Sagittal section of the brain (Case 5), showing elevation and thinning of the floor of the third ventricle by a large tumor mass (solid craniopharyngioma).

vious case, except that the alterations in sex characters in this instance occurring in a female expressed themselves in amenorrhea and sterility, which may safely

be attributed to the disease of the diencephalon.

CASE 6 History.—The patient was a 25-year-old married woman who was apparently well until five years prior to her admission to the hospital. At that time she noted that she was no longer menstruating. She became more or less undernourished and underweight. She occasionally suffered from headache. One year ago she shaved the hair under the axilla, and since then no growth of hair occurred there; there was always a little hair over the genitalia. More recently she developed some impairment of the extrinsic eye muscles and would vomit occasionally.

Neurological Data The patient was a rather undersized female with moderate acromegaloïd features. There was marked scarcity of hair over the pubes and in the axilla. (See Fig. 9.) Bilateral optic atrophy, diminished vision in the left eye, and a weakness of the left internal rectus muscle were the main neurological findings.

Course and Anatomical Findings. The diagnosis of a pituitary neoplasm was made, but because of a marked secondary anemia it was thought advisable to try the effects of radiotherapy. This treatment resulted in but doubtful temporary improvement, and somewhat later, as vision continued to diminish, she was readmitted to the hospital. In the course of a transfrontal craniotomy a tumor was found in the proximity of the optic chiasm. Its capsule was incised, and the contents of the tumor were removed. Following the operation and for a period of three weeks the patient ran a most unusual type of temperature curve (See Chart I) which was regarded to be hypothalamic in origin. Then moderate improvement set in, and some vision was regained. At first the patient steadily gained weight, and the blood count showed improvement. She returned home but soon began to complain of headache, vomited frequently, became somnolent, ran an irregular temperature, and finally became drowsy, disoriented. She was readmitted to the hospital with signs of meningeal irritation and died six weeks later. The necropsy showed some remnants of the tumor in the region of the tuber cinereum, which was completely disorganized. Along side of this area there was an abscess in the process of healing.

Comment. This case illustrates again that a lesion in the region of the tuber cinereum is provocative of alterations in the secondary sex characters, alterations in the essential sex function. It further demonstrates that an extension of such a lesion which occurred during the operative procedure may, and often does, cause the disruption of the temperature regulating mechanism with the resultant temperature-pulse discord to which attention was already directed by the author in collaboration with Strauss.

CASE 7. History.—A woman, aged 57, began to show changes in personality during the year

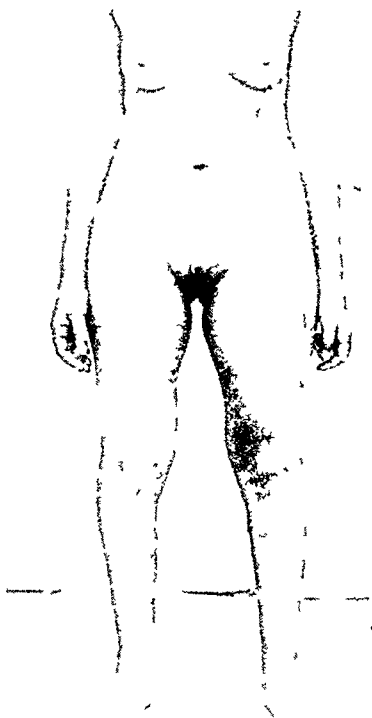
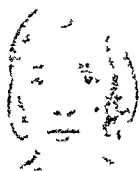


Fig. 9.—The patient on first admission (Case 6). Note complete loss of pubic hair



Fig. 10.—Gummatous lesion in the tuber cinereum (Case 8).

preceding admission to the hospital. She became forgetful, irritable, somewhat euphoric, and voracious. During the last three months she slept most of the time and ate constantly during waking moments.

Neurological Data. The patient, when not asleep, was dull and apathetic. She was disoriented and confused. The neurologic signs were few and included irregularity and inequality of the pupils, slight weakness of the right side of the face, deviation of the tongue to the right,

the optic chiasm in the region of the tuber cinereum and mammillary bodies.

Comments. It is significant that symptoms, such as presented in this case, without the present day's knowledge of the functional significance of the diencephalon would not have been regarded as of a localizing value. Disturbance in appetite, sleep, temperature, and pulse may now



Chart I.—Temperature and pulse rate curves (Case 6). Note the discord between pulse and temperature. When the latter is elevated, the pulse rate does not follow and at times drops.

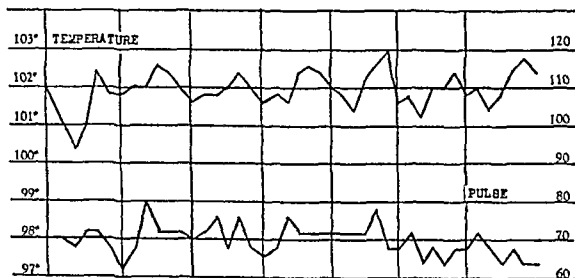


Chart II.—Temperature and pulse rate curves (Case 7). (Compare with Chart I.)

and depressed deep reflexes. From the day of admission until the day of discharge the patient's temperature was elevated. It fluctuated between normal and 103° F. The rises and falls occurred irregularly and were not followed by a corresponding rise in the pulse rate. (See Chart II.)

Course and Anatomical Findings. The scarcity of objective findings, the slowly progressive clinical course, the peculiar mental picture, and the vegetative disturbances including the temperature-pulse discord led to the diagnosis of brain tumor with the probable location in the floor of the third ventricle. At necropsy a tumor was found at the base of the brain, just behind

rightly be considered as manifestations of a focal brain disease.

CASE 8. History.—A man, 48 years of age, was hemiplegic since infancy and mentally retarded since childhood. Five months before admission to the hospital he began to lose his eyesight and was troubled by excessive thirst and frequent urination. Apparently pituitary dysfunction was suspected, and he was given pituitary extract. He responded to treatment by slight improvement in vision and a decided diminution of thirst and urination. As soon as treatment was interrupted—five weeks later—his symptoms promptly re-

appeared. Now return to the previous medication affected his symptoms but slightly.

Neurological Data. The main positive findings included: (1) left-sided hemiplegia, (2) bi-temporal hemianopsia, (3) pallor of the optic discs, (4) pupils unequal and poorly reacting to light. The blood and cerebrospinal fluid and Wassermann tests were positive (4+).

Course and Anatomical Findings. In view of the visual field findings, the polydipsia and polyuria, a pituitary cyst was suspected. The patient declined rapidly and died without operative interference. Necropsy disclosed a syphilitic lesion, gummatous in character, in the floor of the third ventricle. (See Fig. 10.)

Comments. This case illustrates that lesions other than neoplastic but situated in the hypothalamus are equally capable of provoking signs and symptoms of vegetative dysfunction.

GENERAL COMMENT

It is rather significant that in all of the cases of the series reviewed, a lesion in the diencephalo-hypophyseal region was diagnosed. In arriving at a diagnosis, the strictly neurological manifestations, point-

ing to the proximity of the disease process to the interpeduncular space—and hence the tuber cinereum—and the roentgenologic demonstration of calcific bodies in, or above, the sella turcica were, of course, important guides. But the presence of vegetative dysfunctions was a determining factor. No less significant is the fact that in every instance a lesion in the hypothalamus was verified by anatomical studies, and that in the majority of the instances the hypophysis was found intact. This would seem to substantiate the views held with regard to the hypothalamus that it serves as an important center controlling the interacting vegetative functions.

1185 PARK AVENUE

REFERENCES

- Globus, Joseph H.: Pincaloma with Supratentorial Extension and Manifestations of Disrupted Temperature Regulation, *The Libman Anniversary Volumes*, New York International Press, 2:491, 1932.
 Globus, Joseph H.: Teratoid Cyst of the Hypophysis, *Arch. Neurol. & Psychiat.* 9:417, 1923.
 Kuntz, Albert: *The Autonomic Nervous System*. (2nd Ed.). Philadelphia, Lea & Febiger, 1934.
 Strauss, Israel and Globus, Joseph H.: Tumor of the Brain with Disturbance in Temperature Regulation, *Arch. Neurol. & Psychiat.* 25:506, 1931.

SUICIDE OF ADOLESCENTS

The peculiar state of mind of the adolescent explains why so many young people take their own lives, in the opinion of a French physician who has written an article about it. As told by the Paris correspondent of the *A.M.A. Journal*, Dr. Gilbert Robin believes that adolescence is the period of life in which the parents should never use harsh measures in the form of commands or injunctions. There is revolt and an inevitable struggle on the part of the recipient, whose personality at this period is too strong for the world, which is opening its doors to assimilate him.

The point of view of the adolescent is not that of the adult. The adolescent believes himself to be a hero and hence there arise misunderstandings between him and the adult. According to Robin, it is the contact of this intense personality, which considers that it cannot live in the adult world and seeks any means to avoid it, which plays the leading part in suicides of the adolescent. In some cases the contrary occurs. The personality is groping to find its place in organized society and it is at the end of a fruitless search. Others become too introspective, regarding themselves for hours in a mirror, in the effort to find in the physiognomy the reflection of the movements of the soul. They overlook the real appearance to come into contact with an unreal personality.

Among the adolescent there are those who commit suicide because of an exaggerated sense of honor, which they flatter themselves that they possess, often to merit, postmortem, the appreciation which they considered that they were entitled to during life. They believe that in committing suicide they are inflicting punishment on those who failed to appreciate their merits during life.

Other causes are found in two extremes of society, those who have been raised in poverty and have never seen the brighter side of life, and, at the other end of the scale, those who have had parents too rich or too cowardly to refuse anything, wherefore every thrill has been exhausted and there is only ennui left.

Japanese villages without medical facilities are to have them provided through the munificence of Mitsubishi, a famous millionaire, who has given 6,000,000 yen (\$2,340,000) for social welfare work. About \$600,000 will go for village medical service. Over 3,500 villages are without doctors and 1,000 are in "urgent need," according to the Japan correspondent of the *A. M. A. Journal*. A clinic or office will be built in each village at a cost of about \$600 and by 1936, 1,000 doctors will be appointed to these remote villages. As a rule, there will be no medical fee in case of poor farmers and fishermen, but for well-to-do people there will be a small fee, which is expected to be paid chiefly by the annual relief fund or from special grants made by the emperor yearly.

THE COMMON COLD

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The common cold, although rarely fatal, is the major cause of disability the country over and not infrequently leads to complications which cause serious and protracted illnesses. A survey made a few years ago by the New York State Department of Health showed that 57 per cent of the patients who sought medical service from physicians outside of the large cities did so because of colds or tonsillitis.¹ Few escape this affliction and the average incidence is about three attacks per person per year.²

Studies of the common cold,* although not yet productive of a specific method for its control, have taught us much concerning its etiology, epidemiology, prevention, and treatment. It is the purpose of this paper to present certain of the more practical conclusions which can be drawn from these studies. The common cold is not a specific disease entity, so various definitions of it might be given, but we will consider only acute conditions of the upper respiratory tract characterized by nasal discharge and congestion. Sore throat and fever may or may not be present.

ETIOLOGY

As the name cold suggests, this condition was long thought to be related to atmospheric conditions. More recently attention has been centered upon specific organisms which have been described as its cause. There is, however, abundant evidence to indicate that general factors as well as specific germs play a part in the production of colds. In fact, it is hardly reasonable to suppose that but one causative agent could be responsible for this symptom complex of the upper respiratory tract when it is common knowledge that various physical agents and organisms can produce pathological reactions in the lower respiratory, gastro intestinal, urinary, and genital tracts. The organisms and physical factors considered of greatest importance

in the production of the common cold follow.

A Filterable Virus Following the suggestive work of Kruse,³ Dochez and his colleagues⁴ in New York, and Doull and his colleagues⁵ in Baltimore demonstrated that a filterable virus is capable of producing in man and in chimpanzees symptoms and findings typical of an acute cold. This virus was obtained from human subjects with colds and so probably is the etiologic agent of certain outbreaks or epidemics.

Dochez⁵ describes the common symptoms of this "virus cold" in carefully isolated human subjects as "stiffness of the nose, sneezing, sore throat, and headache. No fever was observed during the course of the attack. The duration of the cold was approximately one week." Objective findings consisted of "injection of the conjunctivae, profuse nasal discharge, mucopurulent postnasal discharge, frank inflammation of the nasopharynx with swelling of the lymph follicles and continuous cough."

This benign course, however, occurs only when the subjects are carefully isolated, otherwise this acute process is usually followed by secondary infection with potential pathogens of the nose and throat. These secondary infections usually last two or three weeks and may involve the paranasal sinuses. Apparently either this virus activates organisms which are present in the nose and throat or the intense reaction of the nasal mucous membrane to the virus decreases local resistance to a point that organisms of low virulence are able to set up infections.

Bacterial Colds Various bacteria, but more particularly the micrococcus catarrhalis, the streptococcus, the influenza bacillus, and the pneumococcus are considered capable of producing acute infections of the upper respiratory tract.^{2, 6} A "marked sore throat" is a frequent early symptom of many of these bacterial infections, coryza following as the infection extends upward into the nasal passages. On the basis of a recent study of colds in the

* Thomson and Thomson recently published a review of more than 2,000 papers on the common cold.²

Virgin Islands Milam and Smillie¹⁰ feel that colds are caused by some specific agent with which we are not yet familiar.

Influenza, although considered primarily an infection of the lower respiratory tract, frequently presents symptoms of coryza. In fact, Doull and Bahlke¹¹ report that in an epidemic of influenza among the resident nurses of Johns Hopkins Hospital, 51 per cent of the cases exhibited coryza as "first day" symptoms.

The channel of most frequent spread of these communicable colds probably is through the respiratory tract, although Bliss and Long⁷ report several cases of acute colds in which the mode of transmission seems to have been by means of food. The rapidity with which the acute cold may spread through a community is illustrated by the observation of Heinbecker⁸ that practically 100 per cent of the natives in certain Eskimo villages developed acute respiratory infections with sneezing, coughing, and spitting, within 72 hours after the arrival of their party.

Allergic Colds. Allergic rhinitis is coming to be a well-recognized condition, but the frequency with which it occurs and the chronic reaction of the nasal mucous membranes which it produces, usually diagnosed as sinus disease, are not generally appreciated. In a series of 100 students (See Table I) who were referred to the Nose and Throat Department of the Students' Health Service of the University of Minnesota because of suspected sinus disease, 70 had slow sedimentation rates, suggestive of allergy, and 30 had normal or rapid rates. Sinus x-rays of the entire group showed cloudiness in 65 per cent of the cases with normal or rapid sedimentation rates, and in only 25 per cent of the group with slow rates (probably allergic). Antrum irrigations were then done on those patients whose x-rays

showed cloudiness. In the group with slow sedimentation rates (probably allergic) the irrigating fluid returned clear in 100 per cent of the cases; while pus was found in 85 per cent of the group with normal or rapid rates. Such conditions, although clearly allergic reactions of the nasal mucous membranes, are frequently thought to be ordinary colds and are treated as such.

In addition to the condition of definite allergic rhinitis certain things suggest an element of hypersensitivity in the common cold. For example, the nasal symptoms of hay fever and of acute coryza are practically identical; students who are subject to hay fever and asthma report more colds than students without these manifestations of allergy; and it is common knowledge that under similar conditions of exposure certain persons rarely have colds while others experience numerous colds each year. The usual explanation for this is that one group is immune and the other susceptible to colds. On the basis of our knowledge of immunity, however, the ones who report frequent colds should have the higher degree of immunity, not the ones who rarely have colds. A hypersusceptible group, on the other hand, would continue to have repeated colds rather than to develop an immunity to them.

Physical Factors. Exposure to drafts and chilling of the body frequently results in congestion of the nasal mucosa which may develop into a typical cold. The mechanism through which this disturbance of the mucous membrane occurs doubtless is the vasomotor system. Several investigators¹² have shown that chilling of the body surface produces a vaso-constriction of vessels supplying the nasal and pharyngeal mucous membranes, with an accompanying drop of several degrees in the temperature of the nasal mucosa. Why this is followed by nasal congestion, discharge, and frequently infection has not been explained.

Kerr and Lagen¹³ question the infectiousness of the common cold because they were unable to transmit colds to susceptible individuals either by exposure to patients with acute colds or by inoculation with the nasal secretions of individuals suffering with fresh colds, and are inclined to the hypothesis that "the excessive cooling power of the air at certain times, acting upon the body when the periphery is open

TABLE I.—X-RAY AND SURGICAL FINDINGS IN 100 PATIENTS WITH SUSPECTED SINUS INFECTION

Sedimentation Rates:	Slow, 70 cases		Normal or rapid, 30 cases	
	Cases	%	Cases	%
X-Rays Findings:				
Cloudiness.....	16	25 ¹	15	65 ¹
Normal appearance...	45	75 ¹	8	35 ¹
No. x-rays taken	9	.....	7	.....
Sinus Irrigations				
Pus obtained.....	0	0	11	85 ²
Clear washings.....	16	100	2	15 ²

¹ Percentage of cases x-rayed.
² Percentage of cases irrigated.

[illegible]

volved is probably one of desensitization, hence best results can be expected if the vaccines consist of organisms to which the patients are sensitive.

Ultraviolet Light. Several years ago ultraviolet light was widely advocated for the prevention of colds. The logic for this was that colds are most frequent during the season of the year when ultraviolet rays in the atmosphere are at a minimum. Most of the controlled studies, however, fail to show clear-cut benefits from its use.¹⁷ Smiley¹⁸ who has been studying colds at Cornell University reports that epidemics of colds are largely limited to "cold susceptible groups" and that the interest of at least one-seventh of these students can be aroused and sustained by offering "cold prevention" classes. In these classes matters of diet, ventilation, toning up of the skin vessels by ultraviolet rays are stressed, and in special cases use of vaccines and the correction of abnormalities of nose and throat advocated. Among students who follow the instructions given, Smiley says "that an average reduction of approximately 46 per cent in the incidence of colds can be prophesied. Which of these various factors is of most importance is a question, but the ultraviolet or sunlight bathing is undoubtedly an essential factor in arousing and sustaining the interest of the patient in the project."

Vitamins. The two vitamins most frequently advocated and advertised for the prevention of colds are vitamin A, as found in codliver oil, halibut liver oil and carotene, and vitamin D, as found in codliver oil and viosterol. The general subject of the relation of diet and vitamins to infection has been recently well reviewed by Clausen¹⁹ and by Robertson.²⁰

Vitamin A deficiency in animals unquestionably increases susceptibility to respiratory infections; but inasmuch as this vitamin is found in the average diet, is stable to heat, is stored by the body and is necessary in only minute amounts in order to prevent symptoms of deficiency, it clearly does not follow that the addition of this vitamin to the average diet will increase resistance to respiratory infections. In fact, studies of the carotinoid pigments of the blood by Clausen²¹ suggest that only 5 to 10 per cent of older children *might* possibly be benefited by the use of carotene. Clinical studies²² in which the diets of children and of college students were sup-

plemented by halibut liver oil and carotene, respectively, have failed to show that either of the substances is effective for the prevention of colds. There is, however, some suggestion that vitamin A may be a factor in the prevention of certain complications of colds, such as pneumonia, sinus infections, and otitis media.

Vitamin D is believed effective by many individuals for the prevention of colds but there have been no studies which show that the addition of this vitamin to the average diet increases resistance to infection.

Codliver oil, which contains both vitamin A and vitamin D, was reported by Hess, Bahrenberg, and Lewis²³ to have no influence upon the susceptibility of a group of infants to respiratory infections. Holmes, Pigott, Sawyer, and Comstock,²⁴ on the other hand, found a lower incidence of colds and less loss of time among a group of industrial workers whose diets were supplemented by a tablespoonful of codliver oil per day than among a control group who received no codliver oil. These results have encouraged Dr. Sawyer and his associates to continue their studies, the early results of which look very encouraging. The final reports of these studies will be awaited with interest.

Vitamins B, C, and E are sometimes said to be related to infection because animals on diets without these vitamins are susceptible to infections and frequently succumb to them. Such animals, however, are always in a greatly weakened condition; hence, this observation cannot be accepted as evidence that the injection of extra quantities of these vitamins will prevent infections.

If one were to summarize the present status of our knowledge concerning the value of vitamins in the prevention of respiratory infections, he could only conclude that convincing evidence is not yet available to prove that the addition of any of the vitamins to the average diet increases resistance to colds, but that some of the more recent studies are sufficiently suggestive to make further investigation in this field much to be desired.

Other measures at times suggested for the prevention of colds, such as alkalization and the use of oils or antiseptics in the nose, are supported by no scientific evidence to indicate that they are of any value whatsoever.

TREATMENT

The methods commonly utilized for the treatment of colds can be divided into two groups—general and medicinal. Of these the more commonly utilized are as follows:

Exercise, although rarely recommended by physicians, is a form of treatment extensively used and believed in by many people. They describe it as "sweating out a cold" but what they actually experience is the relief of nasal congestion and discharge which accompanies the peripheral dilatation produced by the exercise. As to whether this relief of congestion has any lasting benefit on the course of the cold no accurate information is available. The apparent benefit which certain patients obtain from massage is probably the result of the same mechanism.

Hot baths and certain types of physiotherapy also cause peripheral dilatation and concurrent relief of nasal congestion. If hot baths are followed by bed rest with sufficient covers to prevent cooling the effect is prolonged and the end result probably better.

Bed rest is considered by many physicians as the best treatment for the common cold but no actual studies have been made to determine how important it really is in the minor infections.

Catharsis has long been used for the treatment of colds on the theory that it aids in the elimination of toxins. MacDonald²⁵ questions its value, but his results are based on a very small series of cases.

Fluids in large quantities have long been considered a valuable adjunct in the treatment of colds, presumably on the theory that with the greater intake of fluids the elimination of toxins is increased. The value of this practice, however, is based upon presumption rather than scientific evidence. In fact recent observations made by members of the Department of Pediatrics of the University of Minnesota,²⁶ suggest that epileptic children on ketogenic diets with restricted fluid intake resist infections better than when their diets and fluid intakes are unrestricted. Some preliminary experiments on animals seem to confirm this observation. Additional studies on this point are at present in progress.

Drugs in the treatment of colds have been a subject of special study for the past several years in our Students' Health Service of the University of Minnesota. In

these studies²⁷⁻²⁹ every possible effort was made to so control them that the personal element would be entirely eliminated in the determination of results. In brief, the procedure followed to accomplish this was as follows:

Students with colds reported to physicians who made whatever examinations were indicated, recorded symptoms and findings, and wrote prescriptions for "cold medication." These prescriptions were then filled by a pharmacist who used in sequence the medications being studied at that time. Four days later cards reporting the subsequent courses of their colds were submitted by the patients and the results of the treatment rated by two physicians, neither of whom had any knowledge as to what medication had been taken by the patient. The ratings used to indicate results were "definite improvement or complete relief, questionable improvement, and no improvement" within 24 to 48 hours after first taking the medication. In final analysis, however, only reports of "definite improvement or complete relief" were considered significant. Finally the pharmacist's record was obtained and the results were classified according to the type of cold and the medication which had been used.

For purposes of classification the colds were divided into acute coryza, subacute colds, influenza, pharyngitis, and other respiratory infections. Most of the cases, however, had acute coryza, which was defined as a cold of not more than four days' duration with serous discharge from the nose and with or without sorethroat, headache, fever, or other symptoms, or subacute colds, which were defined as colds with serous discharge of more than four days' duration or with a mucopurulent discharge of any duration.

Among the medications administered were included some tablets and capsules containing only milk sugar. These were used for control purposes to determine what proportion of the patients would recover spontaneously within the period covered by the report. The results reported by the patients who received these control tablets indicate that 35.5 ± 3.0 per cent of patients with acute coryza experienced definite improvement or complete relief within 24 to 48 hours after reporting for treatment. This high percentage of spontaneous recovery must be kept in mind

when considering the results obtained with other medications.

The various medications studied and the results obtained with them are shown in Table III. The more significant of these results may be briefly summarized as follows:

Dover's Powder. This mixture of opium and ipecac, which originally included also potassium chlorate, was suggested by Thomas Dover in the latter part of the seventeenth century for the treatment of gout. Later it was advocated as a sweating powder in the treatment of colds and for many years was extensively used for this purpose. Our results indicate that this preparation has merit in acute coryza, but that the same amount of opium is just as effective without the ipecac.

Morphine, with which for reasons stated in a previous paper²⁷ this study was started, and its derivative, dilaudid (dihydromorphinone hydrochloride) are effective in relieving nasal discharge and congestion in a large percentage of patients. However, toxic symptoms which follow the use of both morphine and dilaudid and the addictive possibilities of morphine make these drugs undesirable for the treatment of colds.

Codeine-Papaverine. Codeine alone and papaverine alone are each of definite value, although of less value than morphine, in

TABLE III.—RESULTS OF TREATMENT OF ACUTE CORYZA

Medication ¹	Cases	Percentage reporting definite improvement	Toxic symptoms
Codeine-papaverine.....	1515	71.8 ± 0.8	4.9
Dilaudid-papaverine.....	181	74.0 ± 2.2	7.1
Morphine sulphate.....	162	72.7 ± 2.4	9.4
Dilaudid.....	86	67.4 ± 3.4	18.3
Codeine sulphate (½ gr.)...	72	54.1 ± 4.0	25.4
Codeine sulphate (¼ gr.)...	87	47.1 ± 3.6	15.1
Papaverine hydrochloride (½ gr.).....	98	51.0 ± 3.4	3.7
Opium powder.....	28	57.6 ± 6.7	9.3
Powder opium and ipecac...	61	55.1 ± 4.3	5.1
Quinine sulphate.....	64	50.0 ± 4.2	9.5
Acetylsalicylic acid.....	79	48.1 ± 3.8	3.3
Acetylsalicylic acid — acetphenetidin — caffeine.....	58	41.2 ± 4.4	1.9
Atropine sulphate.....	50	40.0 ± 4.7	9.6
Calcium iodine.....	52	44.2 ± 4.7	8.2
Halibut liver oil.....	52	46.2 ± 4.7	8.2
Ephedrine sulphate by mouth.....	50	42.0 ± 4.7	7.8
Ephedrine sulphate, 1 per cent, dropped in nose.....	51	31.3 ± 4.4	4.3
Ephedrine sulphate, 1 per cent, in 1:5000 merthiolate dropped in nose.....	71	47.8 ± 4.0	2.8
Nationally advertised internal med.....	72	44.4 ± 3.9	12.9
Nationally advertised nose drops.....	36	30.6 ± 5.1	3.6
Lactose (control).....	110	35.5 ± 3.0	1.7

¹ For details of dosage see (27, 28)

the treatment of coryza. Together, however, codeine and papaverine are just as effective as morphine, are followed by a distinctly lower incidence of untoward symptoms, such as dizziness, headache, nausea, vomiting, and so on, and are practically without addictive possibilities. Reports from more than 1,500 students who have used the codeine-papaverine combination in acute coryza* indicate that 72 per cent felt that they obtained "definite improvement" or "complete relief" as a result of its use.

Certain other studies which were made of the codeine-papaverine combination indicate that: (1) The proportions of choice are ¼ grain codeine with ¼ grain of papaverine; (2) this mixture of codeine and papaverine gives a significantly higher percentage of good results and produces less headache, dizziness, nausea and vomiting than a corresponding quantity of codeine alone or papaverine alone: in other words, codeine and papaverine in this dosage apparently act synergistically; (3) the optimum dosage of this mixture for an adult of average size is one tablet or capsule after each meal and two at bedtime; if the cold is well-established this dosage should be continued for 2 or 3 days; (4) the effect observed by persons who report improvement is a prompt decrease or complete disappearance of nasal discharge and congestion; (5) the earlier treatment is instituted the higher the percentage of good results reported—in fact, if this preparation is utilized at the very onset of symptoms a few tablets or capsules are usually sufficient to prevent further progress of the cold; when treatment is delayed from the first to the fourth day the proportion of beneficial results reported declines from 73.3 per cent to 60.4 per cent; (6) students who used this preparation for the treatment of coryza lost significantly less time from school than did those who used other medications.

The mechanism through which opium and its various derivatives act to check coryza is not entirely clear, but certain observations suggest that action may be primarily through the vasomotor system.²⁸

The results obtained with other drugs utilized for the treatment of colds include the following:

* The exact preparation used in the study was Co-pav-in" (codeine sulphate, ¼ grain, with papaverine hydrochloride, ¼ grain) which is prepared by the Eli Lilly Company under license from the University of Minnesota.

Quinine sulphate was followed by a significantly higher proportion of good results than were reported for the control tablets, but was less effective than most of the opium derivatives.

Atropine sulphate in many cases produced temporary dryness of the nose and mouth but had no apparent effect upon the course of the cold.

Acetyl salicylic acid; a combination of acetylsalicylic acid-acetphenetidin-caffeine; ephedrine sulphate; halibut liver oil; sodium bicarbonate; and a calcium-iodine preparation gave results slightly, but hardly significantly better than the control tablets.

Ephedrine sulphate, 1 per cent, used locally in the nose produced temporary relief of nasal congestion but seemed to have no effect upon the progress of the cold. The same strength of ephedrine sulphate in 1-5,000 merthiolate solution was followed by a somewhat higher proportion of good results, but was less effective than the opium derivatives.

A preparation which is nationally advertised and extensively used for the "internal treatment" of colds gave about the same proportion of good results as did soda, and acetylsalicylic acid; and a nationally advertised medicated oil to drop into the nose, although used by millions of people, gave no better results in this controlled study than did the sugar tablets.

In sub-acute and chronic colds the codeine-papaverine combination usually relieved nasal congestion and seemed to be of benefit in approximately half of the patients. The difference, however, between these results and those reported for other medications is hardly great enough to be of significance.

SUMMARY

1. Various actual and contributory causes play a part in the production of what we call the common cold. Chief among these are a filterable virus, various bacteria, a hypersensitive state, poor ventilation, and exposure to drafts. The intense reaction of the nasal mucosa, which occurs in the initial stages of the common cold, seems to predispose to infection by potential pathogens which may be present in the nose and throat.

2. No specific measure has yet been shown to be of sufficient value for the prevention of colds to justify its indiscriminate use. Further studies of vitamins and vaccines, however, are highly desirable. In certain individual cases of chronic colds autogenous vaccines or carefully selected stock vaccines seem beneficial. General measures carefully carried out have been found effective in reducing the incidence of colds among "cold susceptible" groups.

3. A controlled study of various drugs used for the treatment of colds indicates that the highest percentage, 72 per cent of 1,515 cases, of good results with least unpleasant symptoms followed the use of a combination of codeine and papaverine. This preparation, as well as certain other opium derivatives, is followed by prompt diminution or complete relief of nasal discharge and congestion. This relief of symptoms not only makes the patients more comfortable but seems also to decrease the probability of secondary infections. Of the other medications studied certain ones seemed to have some merit, but none was nearly so effective as these opium derivatives.

UNIVERSITY OF MINNESOTA

REFERENCES

- 1 DePorte, J. V. Sickness in Rural New York, *JAMA*, 92, 522, 1929.
- 2 V. W. H. Group of 1928-30, Minor Family Am J.
- 3 T. "rt The Common Laborat Research Cox, and Baltimore, Williams and Wilkins Company 1932.
- 4 Kruse, W. Die Erreger Van Husten und Schnupfen *Munchen med Wchnschr*, 61 1547, 1914.
- 5 Dochez, A. R., Mills Katherine C., and Kneeland, Yale Jr. Diseases of the Upper Respiratory Tract *JAMA*, 101 1441, and Shibley, Gerald S. Mills, Katherine C., and Dochez, A. R. Studies of the Etiology of the Common Cold, *JAMA* 95 1553, 1930.
- 6 Long, P. H. and Doull J. A. Etiology of Acute Upper Respiratory Infections (Common Cold) *Proc Soc Exp Biol & Med* 28 53, 1930.
- 7 Bliss, Eleanor and Long, P. H. A Second Note on the Communicability of Colds, *Proc Soc Exp Biol & Med* 31 31, 1933.
- 8 Heinbecker, P., and Irvine Jones, E. I. M. Susceptibility of Eskimos to the Common Cold and a Study of Their Natural Immunity to Diphtheria, Scarlet Fever and Bacterial Filtrates, *Jour of Immun* 15, 395, 1928.
- 9 Walker, J. E. Production of Colds with Micrococcus Catarrhalis, *Jour Infect Dis* 44 254, 1929.
- 10 Mlad, D. F. and Smittle, W. A. A Bacteriological Study of Colds in an Isolated Tropical Island, *J Exper. Med* 5 733, 1931.
- 11 Doull J. H. and Bahlke, Anna M. Epidemic Influenza, *Ann Jour Hyg* 17 562, 1933.
- 12 Mudd S., Goldman A., and Grant, S. B. Reactions of the Nasal Cavity and Postnasal Space to Chilling of the Body Surface, *Exper Med* 34 11, 1921.
- 13 Winslow, C. E. A., and Greenburg L. Vasomotor Reactions to Localized Drafts, *Ann Jour Hyg* 15 1, 1932.
- 14 Kerr, Wm J. and Lagen, John B. Studies on the Transmissibility of the Common Cold. Exposure of Susceptible Individuals under Controlled Conditions. Unpublished manuscript of paper delivered before the

Association of American Physicians, Atlantic City, N. J., May 3, 1934.

14. Gafafer, W. M.: Hardening Processes and Upper Respiratory Disease (Common Cold), *Am. J. Hyg.* 16: 233, 1932.

15. Park, W. H. and von Sholly, A. J.: Report on Prophylactic Vaccination of 1,536 Persons Against Acute Respiratory Diseases, *J. Immun.* 6: 103, 1921. Ferguson, F. R., Davey, A. F. C. and Topley, W. W. C.: The Value of Mixed Vaccines in the Prevention of the Common Cold, *J. Hyg.* 26: 98, 1927. Lempriere, L. R.: Catarrhal Vaccines in Public Schools, *Brit. M. J.*, p. 692, 1927. Lempriere, L. R.: Catarrhal Vaccines, *Brit. M. J.*, p. 973, 1929. Brown, W. E.: Vaccine in Prevention of Common Colds, *Am. J. Hyg.* 15: 36, 1932. Dochez, A. R., Mills, Katherine C., and Kneeland, Yale Jr., Disease of the Upper Respiratory Tract. Problems connected with the Etiology and Prophylaxis, *J.A.M.A.* 101: 1441, 1933.

16. Vallet, G.: Treatment of Acute Respiratory Diseases by Autogenous Vaccines, *Bull. et Mem. Soc. Med. d. hop. de Paris*, 48: 696, 1923. Cecil, R. L.: The Common Cold, Its Prevention and Treatment, *Am. Clinics N. America*, 8: 103, 1924.

17. Barenberg, L. H., and Lewis, J. M.: Effect of Carbon Arc Irradiation on Infants, *J.A.M.A.* 90: 504, 1928. Doull, J. A., Hardy, M., Clark, J., and Herman, N. B.: Effect of Ultraviolet Irradiation on the Frequency of Attacks of Upper Respiratory Diseases (Common Colds), *Am. J. Hyg.* 13: 460, 1931.

18. Smiley, D. F.: Prevention of Colds, *NEW YORK STATE JOURNAL OF MEDICINE*, 32: 1420, 1932.

19. Clausen, S. W.: The Influence of Diet upon the Resistance to Infection, *Phys. Rev.* 14: 309, 1934.

20. Robertson, Elizabeth Chant: The Vitamins and Resistance to Infection, *Medicine*, 13: 123, 1934.

21. Clausen, S. W., and McCoord, A. B.: Limits of the Anti-Infective Value of Provitamin A (Carotene), *J.A.M.A.* 101: 1384, 1933.

22. Barenberg, L. H., and Lewis, J. M.: Relationship of Vitamin A to Respiratory Infection in Infants, *J.A.M.A.* 98: 199, 1932. Shibley, Gerald S., and Spies, Tom D.: The Effect of Vitamin A Upon the Common Cold, *J.A.M.A.* 103: 2021, 1934.

23. Hess, A. F., Lewis, J. M., and Barenberg, L. H.: Does our Dietary Require Vitamin A Supplement, *J.A.M.A.* 101: 657, 1933.

24. Holmes, A. D., Pigott, Madeleine, Sawyer, W. A., and Comstock, Laura: Vitamins and Reduction of Lost Time in Industry, *J. Ind. Eng. Chem.* 24: 1058, 1932.

25. MacDonald, Hugh: Catharsis in the Treatment of Colds, *J.A.M.A.* 80: 1375, 1923.

26. McQuarrie, Irvine: Personal Communication.

27. Diehl, Harold S.: Medicinal Treatment of the Common Cold, *J.A.M.A.* 101: 2042, 1933; and Diehl, Harold S.: The Treatment of the Common Cold—A Continuation Study. (To be published in *Jour. Indus. Hyg.*)

28. Macht, D. J.: Pharmacologic and Clinical Study of Papaverine, *Arch. Int. Med.* 17: 786, 1916. Sollman, Torald: *A Manual of Pharmacology* (4th Ed.), W. B. Saunders Co., Philadelphia, Pa. 298 pp., 1932.

CANCER QUACK DIES OF CANCER!

Charles W. Mixer, self-styled cancer specialist of Hastings, Mich., is dead of cancer on the eve of his prosecution on charges of violating the Federal Food and Drugs Act. His principal medicine, "Mixer's Cancer and Scrofula Syrup," composed of potassium iodide, senna, licorice, yellow dock root, sarsaparilla, wintergreen, glycerine, alcohol, and sugar syrup, had for a long time evaded the Federal law, until Food and Drug Inspectors intercepted a shipment to Chicago and based the recent case on it, says a report from Washington. This step was necessary, as the Federal government can bring cases under the Food and Drugs Act against interstate shipments only.

Even during Mixer's last illness, his office force continued to sell and ship the so-called "cancer cure," which fact led the Government to request that the trial proceed without delay, in spite of the defense attorney's plea that the defendant was seriously ill and could not stand trial.

Mixer's death has now blocked the suit, which will necessarily be dismissed automatically. He employed a physician to care for his own cancer. By correspondence he "diagnosed" his unseen patients, frequently without even a statement from them of their condition or symptoms, and, when they finally ordered some of his preparations, he sent them something else selling for slightly less, carefully explaining that his experience had shown it would be better to take this other medicine until the system became accustomed to the treatment. This procedure left a so-called "credit" which was not enough for additional treatment, but which Mixer used as an inducement to the patient to purchase

more on the payment of a little more money. In this manner, he dealt mostly with poverty-stricken people unable to afford hospital care or a doctor's attention.

In his lengthy correspondence with each patient, there usually occurred periods when the spirits of the patient rose above the gloom and discouragement ordinarily filling the letters, and Mixer used these cheerful and optimistic letters as testimonials of the worth of his "remedies," carefully suppressing the others.

BABIES HUSKIER NOW

Babies born in New York State today have a far better chance of surviving the first year of life than did those born twenty-five years ago, according to the 1933 annual report of the Division of Vital Statistics.

Infant mortality in the State has been declining not only in terms of the number of births but also in relation to all deaths. Twenty-five years ago, out of one hundred deaths of all ages, 19 were of infants under one year of age; in 1933 the proportion dropped to seven. In other words, the rate of infant deaths has declined considerably faster than the general death rate.

Travelers will be interested to know that the sources of drinking and culinary water used on interstate railroads, buses, vessels, and airplanes are inspected and certified by the United States Public Health Service. Ninety-four per cent of these supplies were inspected and certified during the year. It was found necessary to prohibit the use of 28 of these supplies.

RUPTURE OF SUPPURATIVE CERVICAL ADENITIS INTO THE MIDDLE EAR

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Practically all cases of nontuberculous suppurative cervical adenitis either heal spontaneously or require incision and drainage. It is unusual for an abscess of the cervical lymph nodes to rupture into the external auditory canal or the middle ear. The only reports of such cases we have found in the literature were published by Campbell¹ in 1930 and by Rosenwasser² a few months ago. One of Rosenwasser's 4 cases occurred 18 years ago. In an active otologic practice during the last 25 years one of us (L. H. S.) saw a child with a cervical adenitis which ruptured into the external auditory canal. The condition no doubt occurs more often than indicated by the preceding few references. The paucity of literature on the subject may be due in part to the lack of recognition that an abscess in the upper cervical region can drain through the ear. Brief consideration of the pertinent anatomic structures involved will make such a possibility clearer.

ANATOMY

Bones. According to Cunningham³ "the occurrence of a deficiency in the floor of the external auditory canal is not uncommon in the adult. It is met with commonly in the child till about the age of five and is due to incomplete ossification of the tympanic plate." We examined numerous skulls of children and adults and were surprised to find how often the suture of Santorini in the floor of the external auditory canal was patent, due to lack of fusion of the temporal ring and the squamous portion of the temporal bone. A probe passed through the patent suture entered into either the external canal or the middle ear depending upon how the probe was directed and the location of the patency in the suture line.

In addition, there may be an actual defect in the bone itself. According to Barnhill and Wales⁴ "a small dehiscence is found in the anterior wall [of the auditory canal] commonly up to the sixth year of life. Sometimes through the lack of development the dehiscence persists and becomes a

possible pus channel for infection from the auditory canal to the articulation of the jaw." Later they state that "the anterior wall is behind the condyle of the lower jaw and is found in relation to the parotid gland. This wall may be paper-thin or, through lack of development, it may be perforated."

Campbell¹ discusses a third possible route for the passage of pus upward into the auditory canal. He states that "in young children up to the age of four years the attachment of the membranous to the bony portion is very loose. There is loose fibrous connective tissue, which as the patient grows older, becomes firm and tense and which unites more densely the cartilaginous and bony portions. It is for this reason that perforations through this junction of the cartilaginous and bony portions of the wall are seen more frequently in children than in adults."

Lymph Nodes. The lymph nodes which are anatomically related to the floor of the auditory canal are the subparotid and upper deep cervical nodes. The subparotid nodes are beneath the parotid salivary gland, between it and the pharyngeal wall in the lateropharyngeal space. They are superficial nodes which drain the nasal fossa, nasopharynx, and eustachian tubes.⁵ The superficial cervical lymph nodes drain into the chain of deep cervical nodes which, Campbell feels, are probably most concerned in the production of abscesses that drain into the external auditory canal. The deep cervical chain extends from just beneath the ear downward under the sternocleidomastoid muscle.

CASE REPORT

The subject of the following report is the son of a physician. His family history and past history have no bearing upon the condition under consideration.

H. G., aged 7 years, had an acute pharyngitis on December 9, 1933 from which he recovered in a few days. At that time he had a palpable submaxillary lymph node on the right side. On December 22 he developed a more severe throat infection with patches of exudate on both tonsils.

The submaxillary nodes were tender. Two days later the exudate on the tonsils had disappeared, but there was an enlargement of the right upper cervical lymph nodes. These continued to increase in size until there was a large, acutely tender, reddened swelling around the angle of the mandible on the right side. Opening the mouth caused considerable pain. The temperature fluctuated three or four degrees Fahrenheit daily. Slight peripheral injection of the right ear drum was noted on January 1. On January 5 there was a little softening of the inflammatory mass in the neck. The same day and also the following day the patient complained of pain in the right ear. The drum showed a more intense marginal injection than previously, but there was no bulging and Shrapnell's membrane was practically normal. There was no tenderness on direct pressure over the mastoid, nor was there any sagging of the posterosuperior part of the canal wall. The floor of the external auditory canal was tender and later became reddened. During the following days the floor of the canal bulged upward more and more until the lumen was almost occluded. Dr. Jerome Ziegler saw the patient in surgical consultation and advised that incision of the softened mass in the neck be delayed for a few days. On January 9 there was a slight sero-sanguineous discharge from the right ear and in the course of two days this became more profuse, thicker and purulent. Culture of the pus by Dr. J. E. Blair revealed *Streptococcus hemolyticus*.

At this time the swelling in the neck was very large, extending from the tip of the mastoid to an inch below the angle of the jaw. The mass was red, soft, and exquisitely tender. Slight pressure on the inflammatory mass increased the discharge of pus from the external auditory canal. Profuse drainage continued for a week during which time the swelling in the neck decreased in size. The peak reached by the daily rise in temperature became lower. After the first week the discharge became thinner and less profuse. The floor of the auditory canal gradually receded and when the entire drum could be visualized again one could see a perforation in the lower quadrant through which pus drained. To further establish the relation between the cervical abscess and aural discharge the following was done: The canal was carefully dried and the perforation in the drum was observed while gentle pressure was exerted over the swollen glands in the neck. As soon as pressure was applied to the glands, pus discharged through the opening in the drum and rapidly filled the auditory canal. Slight drainage continued for another two weeks and the perforation in the drum closed shortly after the discharge stopped. When the swelling in the neck subsided, a firm, slightly tender mass about an inch long was palpable at the angle of the mandible. The convalescence was uneventful.

COMMENT

Our patient had a suppuration of the upper deep and superficial cervical lymph nodes, some of which are in relation to the floor of the external auditory canal. Since the floor of the canal was pushed upward but the actual rupture of the pus occurred into the middle ear, the probability is that

the suture of Santorini in the floor of the bony canal was patent. That the pus did not rupture directly into the canal may have been due to the more resistant fibrous tissue at that site in comparison to the tissue lining the middle ear. The appearance of the drum of our patient and the absence of signs of mastoiditis ruled out an acute purulent otitis media. The pus which accumulated in the middle ear perforated through the lower quadrant of the drum and drained out of the external canal. Pressure on the glandular mass in the neck caused pus to well up into the auditory canal. The drainage was profuse until the glandular swelling had decreased considerably and then the discharge gradually subsided.

In each of the five cases reported in the literature pus from the suppurating cervical lymph nodes ruptured into the external auditory canal. In one of Rosenwasser's patients there was a perforation in the drum, but there was a complicating mastoiditis, indicating that there was an acute otitis media present at some time. In our case no suppuration of the middle ear was present and there was no perforation in the floor of the external auditory canal. The cervical abscess ruptured into the middle ear and there followed a spontaneous perforation of the drum with discharge of pus. The abscess drained completely through the middle ear.

Drainage of a cervical abscess through the ear is not only of anatomic interest but also of clinical significance. When a patient has a high cervical abscess requiring surgical treatment and the floor of the auditory canal is pushed upward, an external incision may be obviated. Instead, an incision into the floor of the canal at the point of bulging is likely to drain the cervical abscess. This may be a more desirable site for incision, especially in girls, to avoid disfiguring scars on the neck. However, if drainage is not adequate after an intra-aural incision, the usual external incision can be made later.

The early otologic manifestations in uncomplicated cases are of especial interest. There is an acute otalgia, the floor of the canal is red and pushed upward, and the drum may or may not be injected. However, there is no bulging of the drum, nor are there signs of mastoiditis. Since there is no acute purulent otitis media, myringotomy is not indicated. In excluding mastoid tenderness in these cases, particu-

Early when there is some involvement of the drum, persistent pain referable to the ear, forward protrusion of the lobe of the ear, and swelling over the mastoid, one must be careful to exert pressure on the bone itself and not on the inflamed soft parts. However, the presence of a red, bulging drum, mastoid tenderness, and possibly sagging of the posterior superior part of the canal wall indicates a complicating or coincident mastoiditis or otitis media requiring additional treatment. A roentgenogram may show the destruction of mastoid cells.

SUMMARY

Rupture of an abscess of the cervical lymph nodes into the external auditory canal or middle ear is unusual. Pus can pass into the auditory canal by three routes: (a) through the fissure of Santorini, (b)

through the fibrous tissue between the cartilaginous and bony wall of the external canal, and (c) through a dehiscence in the bony wall of the canal. The only way pus can pass into the middle ear is through the fissure of Santorini. The upper deep and superficial (subparotid) cervical lymph nodes are in relation to the floor of the middle ear and external canal. The case reported had an acute suppurative adenitis of the upper cervical lymph nodes following an infection of the throat. A large cervical abscess formed. The pus passed upward lifting the floor of the external auditory canal and rupturing into the middle ear. The drum perforated and pus discharged through the external canal. The patient made an uneventful recovery. This is the first reported case of drainage of a cervical abscess through the middle ear.

531 EAST LINCOLN AVENUE

REFERENCES

1. Campbell F. H. Rupture of Abscesses Into the External Auditory Canal. *Ann. Otol. Rhin. and Laryng.* 39: 144, 1930.
2. Rosenwasser H. Rupture of Suppurative Cervical Glands Into the Auditory Canal. *Arch. Otolaryng.* 19: 610, 1934.
3. Cunningham D. J. *Text Book of Anatomy*. Ed. 3.

- William Wood and Co. New York, 1903, p. 116.
4. Barnhill, J. I. and Wales, E. deW. *Modern Otolaryngology*. W. B. Saunders Co. Philadelphia, 1907, p. 41.
5. Wood G. B. *Surgical Anatomy of Pharynx, Larynx and Throat*. In Loeb H. H. *Operative Surgery of the Nose, Throat and Ear*. C. V. Mosby Co. St. Louis, 1917, Vol. 1, p. 80.

THE USE OF CECAL DRAINAGE IN RUPTURED APPENDICITIS

GEORGE M. DORRANCE, M.D. and STEPHEN W. NEALON, JR., M.D.

Philadelphia, Pennsylvania

Many a surgeon has observed and not a few have commented in their writings that the occurrence of a spontaneous fecal fistula during a stormy postoperative convalescence in cases of perforated or ruptured appendicitis in which drainage was used resulted in an almost immediate cessation of the alarming symptoms.

Eight years ago, the senior author decided to drain the cecum at the time of the operation in an acute ruptured appendicitis so as to obtain the benefit at once.

The youngest patient on whom it has been used was 18 months and the oldest 67 years. In all, the method has been used in about 30 cases.

The applied physiology is considered to lie in that the condition causes decompression of the intestine allowing the gas to escape, thus preventing distension. Three advantages are enumerated:

(1) The Murphy drip is given at regular intervals through the cecal opening, thus placing it in that portion of the intestine where water is best absorbed, permitting an accurate record of the amount the patient has absorbed.

(2) The nursing problem is simplified as the Murphy drip is a real problem in children. The bed does not become wet nor is the patient disturbed as in cases where we use the rectum.

(3) Frequently liquid fecal material passes out through the drainage tube and if necessary an enema may be given through the catheter.

Observations are that fewer desperate postoperative crises occur, in this series there was no mortality.

At first this drainage method was used only occasionally and then in cases that

were really desperate, many of which subsequently became ordinary cases. At present the authors incline to use it in all ruptured cases where drainage is indicated.

The fecal fistulas have all closed within three or four weeks; to date there has been no permanent fistula.

While its performance at the time of primary operation is advised, if a patient becomes desperate with toxic distension, there are no obvious contraindications to producing a fecal fistula at any time post-operatively. This secondary fistula may show more complications than a primary one. The authors have not had a sufficient number of cases to judge the advantages and disadvantages of this procedure.

METHOD

The method of performing primary cecal drainage is to remove the appendix, ligate the meso-appendix, and then apply a purse-string suture around the stump. A 20 French soft rubber catheter is introduced through the opening into the appendix stump for a distance of about 3 inches and the pursestring suture tightened and tied.

As a precaution a plain No. 1 catgut suture is passed through the gut, catheter and gut and ligated. This prevents the catheter from coming out too soon. The cecum is replaced in the right iliac fossa, a clamp is placed on the distal end of the catheter, and two drains of gauze surrounded by rubber dam (Penrose drains) are placed down to the cecum. The peritoneum is sutured around the catheter and drains. The fascia and skin are sutured

in the usual manner to prevent the intestine from protruding.

Gas coming from the catheter if the clamp is removed, is often noted even when the patient is still in the operating room. The patient is returned to bed and placed in the usual Fowler position and the Murphy drip is started within two hours.

The reason for using a catheter, with or without cutting off the tip, is that by virtue of the thickness and texture of its walls kinking is prevented. The catheter is left in place until it comes away of its own accord. This may occur before or after the drains are removed; on the average both are out between the seventh and the ninth day.

For this paper the last one hundred cases of appendicitis on the authors' service were analyzed.

Acute	68
Subacute	13
Subacute abscess	7
Chronic	12
Total	100

The type of drainage used:

Primary cecal drainage.....	7
Secondary cecal drainage.....	1
Penrose drain	14
No drain	78
	100
Deaths	0

The conclusion is that the use of the Fowler position, the Murphy drip, and cecal drainage in ruptured cases reduces the mortality and morbidity of appendicitis.

2101 SPRUCE STREET

PERHAPS THE DOCTORS HELPED, TOO!

There is yet no evidence that the depressed economic conditions of the past few years have lowered the general health of the people of the United States, according to the Surgeon General of the United States Public Health Service. This information is presented in his annual health accounting to Congress which reports the activities of his organization for the 136th year of its existence.

While death rates are available from year to year as an index to health, the Surgeon General has not relied upon these rates alone but has instituted special studies of actual sickness over a period of several years, be-

ginning in 1929, in 10 localities where the depression has been most severe. These studies show higher sickness rates in the economic group rated in comfortable circumstances in 1929 but subsequently reduced to the lower economic class.

The most important reasons given for the continuation of general good health are the vast work of the relief agencies and the fortunate absence of wide-spread epidemics.

It is interesting to note that for the calendar year 1933 the general death rate, 10.5 per 1,000 population, was the lowest ever recorded in the United States; and the rate for 1932 was next lowest, 10.8 per 1,000.

CLASSIFICATION OF MENTAL DISORDERS

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Mental disorders can be classified under two main headings: (a) The organic group, or those occurring on a physical basis, and (b) the functional or psychogenic group.

In this discussion the author does not propose to say a great deal about the organic group beyond mentioning some of the most important subgroups. He would also like to emphasize at this point that the mental system is as much a body system as the cardiovascular, muscular, gastrointestinal systems, etc., and in dealing with any individual, a physician must bear this point in mind, in order to properly treat any illness, of which the patient might complain. Every case of physical illness shows some mental aspects which, of course, may be very mild. It is only in those patients that show predominating mental abnormalities, in connection with their physical illness, that hospitalization in a mental hospital becomes necessary.

Various infections frequently result in more or less prolonged mental derangement requiring hospital care. Acute physical diseases, such as pneumonia, are usually accompanied by delirious episodes which, however, subside as the physical disease improves, and only a very small percentage of these individuals require care in a mental hospital.

Chronic infections, such as syphilis, produce many cases of mental disorder, and about 10 per cent of admissions to State hospitals are due to this disease.

Intoxications due to alcohol, drugs, and other external toxic agents, are responsible for their quota of admissions to mental hospitals, and various traumatic conditions, such as skull fractures, result in quite a number of admissions. Arteriosclerosis is a responsible factor in many cases, as are other less common physical disorders.

In all cases of organic mental disease, treatment of the underlying physical disorder is the only possible way of effecting any improvement in the condition. Many of the disorders do not respond to any known methods of treatment.

During the last few years, the most marked increase in admissions of patients

suffering from organic mental disease, has been in three groups, *viz.*, general paresis, arteriosclerosis, and alcoholism. We know of no way to prevent or cure arteriosclerosis; we cannot control the drinking habits of a community as this is almost purely a social problem, but much preventive work can be done in the prevention of general paralysis. Many of the patients suffering from this disorder give, on admission to the hospital, a history of having had no treatment or only very little treatment during the early stages of their syphilitic infection. If all cases of syphilis were treated early and intensively, the number of admissions due to general paralysis could be materially reduced.

Once definite signs of general paralysis have developed, the most we can hope to do in a mental hospital is to arrest the progress of the disease by various forms of fever therapy, such as malaria, accompanied by intravenous use of the various arsenical preparations. The usual length of life was about two to three years previous to 1924, but we have several patients who were treated in 1924 and who are still alive, some able to support themselves.

Now, to discuss for a few moments the so-called functional psychoses, or those of psychogenic origin. Much discussion has been offered during the past few years regarding the use of term psychogenic. Many authors claim that no mental disorder can occur without definite physical changes, even though we have not advanced to the point, in medical science, where these physical changes can be demonstrated grossly or microscopically. The majority feel, however, that a great many cases can be explained on a purely psychogenic basis.

The author does not propose to describe in detail each separate psychosis or disorder of a psychogenic nature, but will endeavor to show by several concrete examples how such conditions may arise. All obstetricians have seen mental aberrations accompanying pregnancy and varying in their degree of severity. Various environmental factors may have a definite bearing on these mental states. A pregnancy may occur in a family where there

is no financial backing to add another child. This may result in worry on the part of the prospective mother and may result in a definite psychosis. Again, under similar conditions the pregnant woman may feel that she is not capable of assuming the added responsibility for the care of the child. Anyone of many similar factors may result in a psychosis and if the underlying mental state is not recognized early, and the proper frame of mind established, the aberration may be so marked toward the end of the pregnancy, or shortly afterwards, that hospitalization may become necessary.

All school physicians have seen children who, apparently, are not progressing as well as they should. The teacher may request that they be sent to the child guidance clinic with request for an intelligence rating. Complete physical examination may reveal defective eyesight or hearing and when this is corrected, improvement may be noticed in the child's progress. If these factors are not recognized and treated, the child may continue to lose interest in his work, may develop conduct disorders, or even delinquency, and we have an ideal background for the development of dementia praecox or manic-depressive insanity, depending on the personality and tendencies of the individual.

These two forms of functional mental disorders (dementia praecox and manic-depressive insanity) account for by far the largest number of admissions to State hospitals. The author has endeavored to show how such conditions may arise and will now try to describe as briefly as possible the essential features of each group when the disorder has become well established.

DEMENTIA PRAECOX.—The following features are sufficiently well established to be considered the most characteristic of this type of reaction.

(1) A seclusive type of personality or one showing other evidences of abnormality, in the development of the instincts and feelings.

(2) The appearance of defects of interest, and discrepancies between thought, on one hand, and the behavior and emotional reaction, on the other.

(3) A gradual blunting of the emotions, and often hypochondriacal complaints, suspicions, or ideas of reference; indifference or silliness with serious defects of judgment.

(4) Development of peculiar mental trends, often fantastic ideas, with odd, impulsive, or negativistic conduct, not accounted for by an acute emotional disturbance or impairment of the sensorium.

According to the prominence of certain symptoms in the individual cases, there are four main types of dementia praecox, but in many instances the symptoms are so numerous, that it is difficult to place an individual definitely, in one group.

(a) *Paranoid type* with prominence of delusions, either of a grandiose or of a persecutory nature, and often accompanied by hallucinations of the special senses. The delusions often result in antisocial or definitely criminal acts.

(b) *Catatonic type* in which there is a prominence of negativistic reactions, peculiarities in behavior, and often states of stupor or marked impulsive assaultive excitement.

(c) *Hebephrenic type* showing silly behavior with many peculiar mannerisms. These individuals often express delusions but do not react to them as does the paranoid type.

(d) *Simple type* showing defects of interest, or indifference, gradually developing into a state of apathy. In all types there is a gradual withdrawal of interest from their environment, in the end state of which there is no apparent connection between the individual's environment and his behavior.

MANIC-DEPRESSIVE DISORDERS.—This is the next largest group of functional psychoses. The manic-depressive disorders are fundamentally marked by emotional oscillations and tendency to recurrence. There are two main types.

(1) The *manic* reaction with pronounced feelings of well-being or irascibility, flight of ideas, overactivity, and distractibility. In the more pronounced phases of this type of reaction, the individual may be quite destructive and show assaultive tendencies.

(2) The *depressive* reaction with feelings of mental and physical insufficiency; despondent, sad, or hopeless moods, and in severe cases, marked retardation, often extending to the point of a stuporous reaction. The feelings of despondency and anxiety may be so pronounced as to result in suicidal attempts.

No attempt has been made in the discussion, to give a detailed description of all the forms of mental diseases.

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EDITORIALS

For Better or Worse?

Governor Lehman's keen interest in the Workmen's Compensation Law is reflected in the speed with which three amending bills of prime importance have been introduced in both Senate and Assembly. Unfortunately haste has not been matched with wisdom in every case; and it is to be hoped that the Legislature will carefully consider the implications of each bill before taking action.

The O'Brien-Canney Act, which requires all compensation insurance not underwritten by self-insurers to be placed with the State Fund, seems innocuous on the surface. The medical profession of the State, however, has found the State Fund as ruthless and unfair in its dealings with physicians as any of the private carriers—indeed even more unfair. Unless the profession receives some definite assurance that abuses complained of will be promptly and surely terminated it cannot acquiesce in the virtual monopoly that the O'Brien-Canney bill would create. Any amendment of such far-reaching consequence should definitely provide that the injured worker may select his own doctor

from a list approved by the Medical Society of the State of New York or its component county units.

The second Act, sponsored by Senator O'Brien and Assemblyman Kantowski, is commendable in both purpose and form. Seeking to eradicate medical abuses such as fee-splitting and solicitation, it adds five physicians to the Industrial Council, thus giving medicine equal representation with Labor and Industry. Such an arrangement should materially help to prevent administrative controversies and procure wise solutions of the problems that continually arise.

The Coughlin-McCaffrey Act which extends the compensation laws to include all disabling diseases occurring in the course of employment has nothing but good intentions to commend it. In the absence of an accepted definition of "occupational" diseases, it would foster extensive malingering and force every doctor to become a detective. It would be far wiser first to formulate an acceptable definition of occupational ailments and then provide suitable compensation for them than to open the way to protracted controversies by extending the scope of the law in such a haphazard and indeterminate manner.

There is no doubt that the medical aspects of the Workmen's Compensation Act are gravely in need of reform; but there can be no satisfactory revision that does not encompass the medical point of view. Governor Lehman tacitly endorsed this principle last year by appointing a committee of ten physicians to study the situation. The profession will be keenly disappointed if he fails to translate the recommendation of his Medical Advisory Committee into law and throw his support behind opposite legislation.

Fluid Extract of Ergot

Despite the multiplicity of available proprietary concoctions of ergot, the U.S.P alcoholic fluid extract is still the most widely used preparation in obstetrical practice. The official extract of the National Formulary is an aqueous extract and of distinctly inferior therapeutic

efficiency. Pharmacologists and clinicians alike have been justified in suspecting that the biological potency of the alcoholic extract has diminished during recent years, and that either the active alkaloids are deficient in quantity, or the products of decomposition (amines) are present in excessive amount, or both. Such imperfections in the finished product may be due to chemical changes in the ergot before use, or in faulty manufacturing processes, and have unfortunately been responsible for controversial discussion.

There is no fundamental difference between Russian and Spanish ergot in their natural state, but variations in the method of curing, preserving, storing, packing, and shipping have resulted in noticeable changes in some of the ergot when received in the United States. Although sub-standard drugs may be imported and sold in this country, provided their actual quality is stated on the label, strict regulation of their final disposition is bound to be uncertain, and the wisdom of imposing so great a supervisory responsibility upon official inspection is open to serious question. Dampness, heat, mould, insect infection, and so on, are all inimical to the purity and strength of the crude drug.

"Reconditioned" ergot has probably been the basis of much of the dissatisfaction following the clinical exhibition of the fluid extract, because of the intrinsic deterioration incidental to decomposition or putrefaction. Both Thompson and Rusby examined a large number of samples of the fluid extract of ergot, and reached the conclusion that the cockscomb test is no criterion of the drug's purity or the preparation's biological activity. It behooves obstetricians to insist that the ergot used in the manufacture of the fluid extract be of prime quality, free from mould, slime, objectionable odor, insects, and discoloration, and that all the requirements specified by the United States Pharmacopoeia be rigidly followed; otherwise, the medical profession may have to limit the prescribing of one of the most useful remedial agents in its obstetrical armamentarium.

Liver Function Tests

During late years improvement in biochemical technic with consequent advance in our knowledge of chemical physiology has been of great practical value in the study of the physiology and pathology of the parenchymatous organs which are the main chemical laboratories of the body. The tests for renal function are a peculiarly elegant example. The kidney is preponderantly an excretory organ. Both the initial product, the blood, and the excretory product, the urine, are readily and conveniently obtained for analysis.

The functional study of the liver presents a much more difficult problem. The formation and excretion of bile may be, and probably is, an entirely separate and distinct process; but there are a host of physiological processes that have been rightly or wrongly ascribed to the liver that may or may not be confined to that organ. As each physiological function has been described in the experimental laboratory, no long period elapsed before a clinical test based on disturbance of this particular function was proposed.

The pitfalls have been many because of the enormous factor of safety provided by the liver. Mann and his associates have shown that the liver may be destroyed to a last minimal 20 per cent and this "saving remnant," even though severely damaged by the operation, can yet preserve normal function. Thus all the tests based on excretions of foreign sugars, destruction of injected amino acids, disturbances of cholesterol metabolism, do not indicate incipient cases of liver dysfunction with any reasonable certainty. However, the field of enzyme chemistry offers hope for a really sensitive indicator.

Somogyi¹ of St. Louis has developed a method of accurately determining the actual amount of starch-splitting enzyme in the blood, by the use of only 1 c.c. of plasma. He and his associates have found markedly low diastase values in icteric blood, in the blood in toxemia of pregnancy, and regularly in connection with

¹ Somogyi, M.: Blood Diastase as an Indicator of Liver Function, *Proc. Soc. Exper. Biol. and Med.* 32: 538, 1934.

hepatitis, cirrhosis, abscess and carcinoma of the liver, as also in numerous cases of cholecystitis. They were thus led to the assumption that low liver diastase was found only in cases in which some form or other of liver damage and consequent impairment of liver function, was present. They claim that clinical observations as well as histological examinations, performed after operations and autopsies, fully support their theory. In some cases the low level of blood diastase directed attention to liver pathology before the existence of the clinical picture was revealed. Improvement of the hepatic condition after successful medical or surgical therapy was paralleled by the rise in blood diastase.

The Invasion Spreads

When the Federal Government embarked upon its extravagant program of hospital construction after the World War, the medical profession prophesied trouble. The less than two hundred thousand disabled who returned from France could easily have been handled in soldiers' homes and hospitals under the jurisdiction of the Army and U. S. Public Health Service. The erection of elaborate institutions all over the country provided a luscious melon for political favorites to divide, but it also raised the question of how to keep thousands of unnecessary beds filled.

The veterans' lobby, of course, had already prepared an answer. Taxpayers have been deprived of small comforts and even necessities to provide hospitalization for wealthy ex-service men suffering from ailments bearing no relation to their wartime duties.

The medical profession resents paying taxes to support hospitals that are in direct and unfair competition with its livelihood. From the outset it has feared that the Federal Government would be driven further and further into medical practice in order to justify the existence of these unnecessary institutions. Representative Stephen A. Rudd (Democrat, New York) gives substance to its fear with a bill he has recently introduced into Congress.

H. R. 43 requires the government to provide postal employees with free hospitalization for "tuberculosis, nervous diseases, or kindred occupational ailments." It does not explain how tuberculosis and nervous diseases came to be linked as "kindred occupational" risks of the Postal Service. Neither does it indicate what the other members of that hybrid pathological family are. Without reservation or qualification, Mr. Rudd offers every postal employee, regardless of earnings, free medical care in a government institution for an unspecified number of lesions.

Should H. R. 43 be enacted into law, the medical profession would have to pay additional taxes to have another large section of the public transferred from private practice to Federal care. A barrage of protests to Congress may serve to avert this injustice. Write or wire your representatives at Washington at once that the physicians of the country are unwilling to "hold the bag" for the misguided paternalism (or political maneuvering) of such bills as Mr. Rudd's.

Not Perfect but Desirable

It would be too much to expect that any one bill introduced into our Legislature would reach all the abuses which the profession desires corrected in the administration of the Workman's Compensation Law. There is a certain cohesive force among those whose interests would be disrupted, that makes for hurdles which no single act of legislation could surmount.

Reform therefore must be progressive and evolutionary. In the current legislative bill, however, there is much that is desirable.

The survey undertaken ten years ago by a Legislative Commission recommended as one way to correct abuses, that the Commissioner of Labor should have the advice and council of a medical board. Some of our County Societies opposed this, believing it was an effort to provide State jobs for certain physicians engaged in industrial work. The report of the medical committee headed by Dr. Pool nevertheless carried a recommendation for

a medical advisory board. There were intimations from labor, when the matter was under consideration last year, that it would be better if the Industrial Council were increased by adding to its membership a number of physicians, equal to the representations from labor and from industry. Then medicine would be represented adequately on the Industrial Council.

This one factor alone makes bill No. 19 desirable, but there are other desirable features in the legislation.

The county medical societies representing medical opinion in their respective localities, sooner or later will have to assume responsibility for the character and quality of medical services delivered to injured workmen. We stand for the free choice of the physician by the injured workman, and the county societies will be able to group and list their members as they are available for the work required. The county society is, by and large, composed of the reputable men of the community. There are physicians who will not want to do industrial medicine. Such need *not* be listed. Within the limits of those who are reputable and capable, free choice should be exercised.

The measure carries with it the implication, that for good cause, a name may be withdrawn from the lists by the county society. This feature permits the maintenance of standards of quality. On the other hand, it will be the function of the

county society to enact By-Laws that will give every member, and even those reputable men who *may not belong to organized medicine*, every possible protection and safeguard.

As a result of this, it will be found that the county societies will gradually broaden their scope. At present they are concerned with the protection of the public generally, but when this legislation will have been enacted, they will have to protect ALL physicians in the county who are of good repute and standing, and competent to do the work.

We have never believed in the establishment of a fee schedule. The prevailing fees in any particular community for similar work, we hold, should be the basis of pay.

Conditions differ in industrial areas from those in metropolitan New York City and from both in rural sections. It is desirable therefore, that the county societies shall determine whether clinics shall be established and how they shall function.

By all means, let us back up our committee in support of bill No. 19 to the end that by proper representation on the Industrial Council a real start will have been made in reforms which are so necessary to stop exploitation of labor; to stop discrimination against physicians who desire to do industrial surgery and who are now kept from this work; and to establish control over quality of services rendered.

Special Medical Broadcast Program

The American Medical Association will broadcast on a special program arranged through the courtesy of the National Broadcasting Company over a network of stations, beginning at 6:00 P.M., eastern standard time, Monday, February 18. The program will include music and three speakers from among physicians in attendance at the Annual Congress on Medical Education and Medical Licensure, meeting in Chicago on that day. The speakers will be introduced by Dr. Morris Fishbein. The speakers and their topics are as follows: "Advancement of Medical Education," Walter L. Bierring, M.D.; "The Prolongation of Life," Ray Lyman Wilbur, M.D.; "The Battle Against Tuberculosis," Kendall Emerson, M.D.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

Drug Addiction as a Medical Problem

Ossining, N. Y.

To the Editor:

In the December 15, 1934, issue of the *New York Medical Week* appeared an editorial entitled "Reform for Its Own Sake," which stimulated me to send to *Medical Week* a letter in opposition to the stand taken by the editorial. Unfortunately, my reply was of such length that *Medical Week*, could not find the space required for its publication.

Medical Week suggested that I seek your larger columns for presentation of my views in a matter that seems to me to deserve wide and thoughtful consideration by the profession. I hope you may find some way to place before the members of the State Society both the editorial and my reply.

That editorial reads as follows:

"If all the reforms advocated by many sincere but ill-informed persons were laid end to end—it is more than likely that they would lead nowhere. The Welfare Council's Committee on Chronic Illness has recently released a report on drug addiction which is typical of the alacrity with which many social crusades proceed from a mistaken hypothesis. Designating narcotism as a chronic disease, Miss Mary C. Jarrett has no difficulty in arriving at a solution in the form of therapeutic farms. This would be an easy answer to a difficult question if drug habituation were essentially a medical problem. Unfortunately, it is not.

"While present police regulations are undoubtedly archaic and there is inadequate provision for the care of addicts desiring treatment, the fact remains that most authorities consider narcotism essentially a criminal problem and there is no satisfactory medical cure. The only way to put an end to drug addiction is to prevent it—and the only way to prevent it is to cut off the illicit vendor from his source of supply. Until the nations agree to limit the production of habit-forming drugs to medicinal and industrial requirements, there is little hope of curbing narcotism. Therapeutic farms are indeed a palliative but not much can be hoped from them in the way of either prevention or cure."

My response is:

Your editorial strikes a note that leads me to comment. I would preface my remarks with the statement that I am not an advocate for the social workers. In fact, I am so far opposed to their philosophy and point of view as to feel quite out of harmony with the present national administration which appears to me to be a "social workers' administration." I believe that time will put

its mark of disapproval upon the "social workers' administration" just as it already has done on the "chamber of commerce administration" of ex-President Hoover, upon the "noble experiment," and other social procedures in which over 100 million people are used as guinea-pigs for experiments in social control and social reform. "Rugged individualism" has failed; the present régime of subtotal elimination of individual initiative will fail in this country just as the total elimination has failed in other countries already.

I hope that the paragraph above will give the intended impression that I am no particular friend of the "social work point of view." However, in the present instance, I believe that Miss Mary C. Jarrett has arrived at a valid conclusion in her two-volume work on Chronic Illness (which I have read from cover to cover, by the way) when she classifies drug addiction with chronic illness.

To jump from diagnosis to management or treatment of the condition is possible in only a few diseases and certainly is not possible in so complicated a problem as that of drug habituation. Of course, this jump is quite characteristic of social worker management, with rare exceptions. In this, I am opposed to Miss Jarrett's recommendation. At the same time, it appears to me that this jump is the subconscious origin of the editor's indignation which has given rise to the editorial; he has a valid, a kind of "righteous" indignation. The gap, the hiatus is too glaring; the chasm is too appalling—he cannot straddle it.

Yet, with all his emotional conflict, it is worthy of note that the editorial writer admits that "therapeutic farms are indeed a palliative . . ." Just at this point he leaves an opening in his defenses. I want to attack at this point. I am sure that the editor will admit that he has to use palliative management in the handling of some of his private hospital cases. He does not neglect them entirely, just because his palliative procedures do not give him much hope in the way of either prevention or cure (using the editor's own words).

This editorial also uses a glaring phraseology which I wish to dispute. It is as follows: ". . . if drug habituation were essentially a medical problem. Unfortunately, it is not." A companion statement is ". . .

most authorities consider narcotism essentially a criminal problem. . . ." These two I would dispute together.

First, as to whether drug habituation is essentially a medical problem or not, I have to beg your indulgence to grant that psychiatry is a branch of medicine. If you grant me this point without claiming that I am begging the question, I think you have lost your case, because there is no doubt in the minds of the psychiatrists, that narcotism is a psychiatric problem. Those who have made adequate psychiatric examinations of any considerable number of narcotic addicts are convinced that these unfortunates are filled with unsolved personality problems, conflicts, repressions, et cetera, which we also find in a great many other types of personality deviates. That this is a fact can not be refuted today with success.

Of course, this does not mean that we know all about the mentality of the addict. We still would like to be able to explain why, with a given set of psychological conflicts, and so on, one group of youths works out to normality without outside help, apparently in the course of the process of normal growth and development, while another group becomes addicted to narcotics, another becomes addicted to alcohol, another becomes perverted, another becomes criminal, and still another becomes floridly psycho-neurotic, while some few belong in several groups.

I will claim that we now have a number of ideas and theories as to why these differences exist in the "working out" of a given set of conditions, while I admit, at the same time, that much still remains to be learned and determined with certainty. I can not go into the matter deeply in a brief discussion of this type.

If you will admit, for the purposes of argument, that drug habituation is a psychiatric problem and that psychiatry is a branch of medicine, it follows naturally that you will have to withdraw from your position that drug habituation is not a medical problem.

If you will grant me this advantage I will press another point upon your attention. The therapeutic farm idea isn't so bad after all! Now, I am eager to state that a therapeutic farm operated under social service ideals would indeed be only a palliative, as your editorial claims but I am equally strongly of the opinion that a therapeutic farm operated under psychiatric control might be a successful venture. The duty and responsibility will rest upon the psychiatric profession to supply adequate personnel for such an undertaking. Such personnel would have to be trained in general medicine, in institutional psychiatry, in mental hygiene

clinics or child guidance clinics and in juvenile and adult court psychiatric clinics.

In addition, these psychiatrists would have to be gifted for this particular type of understanding; it is an art—not a science, though assisted by many sciences. They would have to be familiar with psychoanalytic principles and ought to be psychoanalyzed themselves as a prerequisite, unless they have been able to work out their own personality problems to a fairly normal conclusion. So much for "therapeutic farms"; if they can be made really therapeutic in a psychiatric way, all well and good; if social service controls the therapy, the point is that therapy belongs to the field of medicine and social service is not equipped nor legally licensed to practice therapeutics.

I want to answer your editor's "legal argument," too; that "most authorities consider narcotism essentially a criminal problem . . ." That is true. To regard abnormal behavior as criminal is an easy way to bring such behavior under social control. No one disputes that the public welfare (group welfare) must control individual conduct. No one may live where others live and still conduct himself as if those others did not exist. That is one bit of ethical theory and moral conduct that is biologically well founded. But, I would point out again what is already well known and that is, that the insane were regarded as criminal until very recent times, even after the many centuries when they were called "possessed of demons."

As late as 1906, the insane could be taken from the State Hospital in Rhode Island on a bail bond, contingent upon their good behavior. I infer what we all know; that the label of "crime" is largely a matter of time and place; era and circumstance. Even in New York till recently, suicide was punishable as a crime. Granting that to label a specific type of conduct as criminal is a means of social control, it is an expedient, dictated by necessity and to be changed when times are suitable for such orderly transition.

With regard to the editor's suggestion that "the only way to put an end to drug addiction is to prevent it—and the only way to prevent it is to cut off the illicit vendor from his source of supply," I feel rather diffident. The editor's net sentence is just too much. It is as follows: "Until the nations agree to limit the production of habit forming drugs to medicinal and industrial requirements, there is little hope of curbing narcotism." [*sic*] If this is really the state of affairs, we may as well put up with the problem; grin and bear it. The nations never yet have agreed on anything for very long. When things seem fairly well settled, some nation or other feels that the agree-

ment is merely another "scrap of paper" and proceeds to make it such. Among equals there is no master and it would seem that among nations there is very little more guidance by eternal principles than there is among individuals, sometimes it is questionable whether there is as much. Even among individuals, it is difficult to get agreement and it is impossible to maintain it.

It occurs to me that our experience with the Volstead Amendment ought to refute the statements of the editor which I have just quoted. There were some people who thought that "the only way to put an end to alcoholic addiction is to prevent it—and the only way to prevent it is to cut off the supply." What a miserable failure that was! To attempt to cut off the supply of drugs would be just as impracticable. The *Encyclopedia Britannica* states that opium may be produced wherever the climate is temperate or subtropical and the rainfall is not excessive. It has been produced in Virginia, Tennessee, and California, only the cost of labor made it unprofitable. Such being the situation, we are in a position, in this particular, as we were to try to prevent disease by shutting off the supply of bacteria.

The simile I have used is not so far-fetched as it may appear to be on the surface. The comparison I would draw is that we have found in the case of the infectious diseases that we may, at least, immunize the individual since we can not shut off the supply of bacteria completely. We can do a similar thing, I believe, in the case of the prevention of drug addiction. Remember that I am using a simile and allow me to proceed.

We psychiatrists know that the addict is a hypersensitive sort of creature on the average. He can not face reality. The world is too tough for him. His addiction forms an escape from reality—often into temporary oblivion. That narcotic is a crutch, it is a means of support psychologically, he loves it, it is his sole defense against a cruel world of harsh reality. The addict is an immature person emotionally, he is often unstable. He is inferior and his inferiority comes out in his personality makeup in myriad ways. He is usually weak, suggestible, and inadequate. In many ways, without being insane, his personality is introverted, schizoid, and sometimes paranoid. If he were not a drug addict he would be an alcoholic, a pervert, a criminal, or a psychoneurotic. He frequently passes through several of these phases. Some become insane, few ever become normal.

What causes some persons to become addicts while others become normal when both had similar beginnings is one of the many fascinating problems of psychiatry that still remains unsolved. I contend that the first step in the solution of the problem is to

recognize drug addiction as a psychiatric problem—medical, if you please! Of course, we can go through the usual stages. Let religion handle the problem first. Then let the law take it in hand, that's where it is now. Then let the social workers (public welfare) take charge of it and then, when everybody admits that it is not their problem, let the psychiatrists have it. That has been the course of history with the insane and the alcoholics. Now come the drug addicts, the perverts, and the criminals.

I, for one, am in favor of therapeutic farms for narcotic addicts even if a social worker did propose it. As outlined above, my suggestion is that the therapeutic part be placed in the hands of psychiatrists competent to analyze these personalities and to desensitize them, physiologically, if possible. It would take only a slight change in the Mental Hygiene Law to provide the legal machinery. The public funds which now support these addicts as "unemployables" would meet the expense of operation. Properly chosen land, properly worked, as well as shops for necessities would make the group almost entirely self-supporting.

In conclusion I would apologize for the wide range and diffuseness of this reply. In comparison with the succinct way in which the editor has said so much in so little space, I feel that what I have written needs defense. My defense is that the editorial is too important to pass over without comment and too thought-provoking to be discussed in a few words.

Finally, as to my own position in the matter, I am writing as an individual. These are my personal views, I alone am responsible for them, without assuming to speak for any of my colleagues. My position with regard to this discussion is that of a private citizen and not that of an official or public servant.

HAROLD I. GOSLINE, M.D.

Original Use of Buffer Salts as a Pharmacological Agent

90 Riverside Drive, New York City

To the Editor:

There appeared in the *NEW YORK STATE JOURNAL OF MEDICINE* an article on March 1, 1934, on "A New Intravenous Therapeutic Agent for the Control of Peptic Ulcer," which described the use of a solution, the composition of which is given in detail in the issue of June 15, 1934, in connection with an admission of the authors, of their failure to include the complete bibliography in connection with the use of this substance in gastric and duodenal ulcer. To describe this therapeutic agent as new is in this instance entirely unwarranted. The fact that

a solution whose composition is *basically the same* as that described was published nine years previous to the present publication is sufficient to invalidate the claim of originality. Furthermore, the description of the basic principles involved, ignoring as it does the original contribution, is inexcusable, to say the least.

A perusal of the article by Butman *et al.* would give the impression that this solution was originated by L. J. Schultz, when as a matter of fact a solution of practically the same composition had been used in the treatment of thromboangitis obliterans since the middle of 1921. This article published by Butman, Schultz, and VanKleeck in no way suggests that the use of this solution was based upon work done in my laboratory by one of the authors, and omits specific mention of its origin either in the article referred to, or in the subsequent note regarding its composition appearing in June 15, 1934.

This letter is not written with the desire to claim exclusive priority for the introduction of this solution but simply to emphasize the essential lack of consideration evident in the article referred to. In a communication published in the *Journal of Laboratory and Clinical Medicine* on "The Use of Buffer Citrate Solution as a Diluent and Preservative for Red Blood Cells," written at my suggestion by L. J. Schultz, who worked in my laboratory, a description of this solution is furnished which corresponds to the description appearing in the article in *International Clinics* in September, 1925. In that article the fact is definitely stated that this solution was being used by myself, and that the effects were being observed upon patients in my practice. The work on red blood cells was carried out at my suggestion.

Under the circumstances, I feel that any further work in connection with this solution should at least mention the fact that the use of certain buffer salts in connection with sodium citrate and sodium chloride as a pharmacological agent for the treatment of various conditions was original with me.

BENJAMIN JABLONS, M.D.

Child Labor a Social and Industrial Malignancy

694 Miller Ave., Brooklyn.

To the Editor:

Reading the editorial on the proposed Child Labor Amendment, ["Elementary Rights of Children and the proposed Child-Labor Amendment," January 1, 1934] one is apt to be misled by its obtuse generalities, its unreasoning prejudices and its mawkish sentimentality.

According to you our Congress is the agency of Moscow and all legislation emanating from the congressional halls, a heinous plot to sovietize American institutions. Conversely, you portray the various state legislatures as the only genuine patriotic bodies capable of passing upon Child Labor problems. To the physician willing to weigh facts your contention is full of buncombe. No rational individual will believe for a moment that Congress is trying to snatch children away from their mothers to the detriment of the American home. This is the tripe which various organizations interested in exploiting child labor are doling out to the unwary.

You do not mention that various States are trying to attract industry by the lure of cheap child labor, and that a Federal law would put a stop to this rapacious form of human exploitation and unfair industrial competition. Instead you becloud the issue by dragging in the Red bogeyman and exhibit misdirected anguish at the plight of children under a bureaucratic form of sovietism. Offering the assistance of the medical profession is wholly beside the point and sugary platitudes can in no way remove a nasty irritation to our present colicky economic situation. Child Labor is a social and industrial malignancy and the treatment of it is radical excision. The Federal Amendment is the scalpel for this operation. To allow Child Labor to survive in any state is to expose the national organism to a definite menace.

GEORGE S. MEISTER, M.D.

NEW SERUM FOR UNDULANT FEVER

A report of twenty undulant fever patients who made prompt recovery to health and normal activity following the use of a new serum was made to the American Society of Tropical Medicine, which met in San Antonio last month. The serum was produced from goats after inoculating them with chemically treated suspensions of the causative organism, *Bacterium melitensis*.

Drs. W. D. Wherry, A. E. O'Neil, and Lee Foshay, of the University of Cincinnati

College of Medicine and of the Cincinnati General Hospital, are the group responsible for this advance in the fight against undulant fever.

Doctor (examining East Side brunette):
"You have got acute appendicitis."

Patient: "Don't get fresh! I came here to be examined—not admired."—*Nebraska State Medical Journal*.

Society Activities

COMMITTEE ON LEGISLATION

BULLETIN NO. 2, JANUARY 15, 1935

The following bills have been introduced since the last bulletin:

Senate Int. 123, Esquirol; Assembly Int. 150, McCaffrey; Assembly Int. 210, Neustein, amends the Workmen's Compensation Law relative to physical examination of employees by striking out provision that physician, as employee or carrier may select and pay for, may participate in examination if employee or carrier so request. Referred to the Labor Committee.

Senator Esquirol introduced this bill last year but failed to have it reported by the committee. We were never able to understand just why it was not advanced. In our conversations with representatives of organized labor we thought that they approved the bill. It provides that an injured employee, claiming or entitled to compensation, shall submit to such physical examination as the Commissioner or the Board may require and deletes the following: "Such physician or physicians as the employee or carrier may select and pay for, may participate in an examination if the employee or carrier so requests." Labor has frequently complained that the presence of the carrier's physician at the examination of an injured employee by the Department of Labor's physician, is not desirable.

Senate Int. 154, Schwartzwald; Assembly Int. 196, Doyle, amends the Health Law by providing reports of infections, contagious or communicable diseases must be made to the health officer of city, town, or village from which specimen came, requirement to report also to place where laboratory is situated being stricken out. Referred to the Health Committee.

This bill was introduced at the request of the Department of Health. It deletes from the law some sections which have become obsolete.

Senate Int. 203, Berg, creates state commission of 15 members to investigate illegal practice of professions now regulated by law and to examine and recommend changes in laws governing professions, and appropriating \$50,000. Referred to the Finance Committee.

We have had no opportunity of discussing with the Senator the reason for his introducing this bill.

Senate Int. 208, Byrne, Lien Law, for liens of hospitals, physicians, and nurses for care and treatment of certain injured persons. Referred to the Judiciary Committee.

Senator Byrne has reintroduced his hospital lien bill of last year, the one which passed the Senate.

Senate Int. 246, Wicks, adds new article to the State Charities Law abolishing Temporary Emergency Relief Administration and transferring on July 1, 1936, all powers and duties thereof to the Social Welfare Department to be exercised by a division of unemployment relief. Referred to the Relief and Welfare Committee.

There is a commission that was appointed by the Governor to study the administration of the temporary emergency relief funds. The commission will in the near future make a report of progress to the Governor but it is not likely to finish its study in time for consideration by this Legislature.

Assembly Int. 123, Breitbart, adds new section to the Civil Practice Act empowering courts in personal injury actions to direct any party or child of such party to submit to one or more blood tests. Referred to the Codes Committee.

Assembly Int. 166, Breitbart, amends the New York City Inferior Criminal Courts Act by authorizing court to direct the making of blood tests and permitting the results thereof to be received in evidence. Referred to the Codes Committee.

These bills are introduced for the purpose of giving authority to hospitals when they wish to employ the blood test to determine paternity, we are informed by Mr. Breitbart.

Assembly Int. 185, G. W. Stewart, amends the Education Law relative to supervision of clinical laboratories by persons licensed to practice medicine. Referred to the Education Committee.

Mr. Stewart has reintroduced his bill of last year. He also is preparing for introduction a bill submitted to him by us which includes x-ray laboratories.

ACTION ON BILLS

Senate Int. 45, Fearon, reorganization of county government, has passed the Senate and reached third reading in the Assembly.

HEARINGS

Jan. 23—Sen. No. 18
Assent. No. 18

Workmen's Compensation; exclusive State Fund; joint hearing before Committees on Insurance.

- Jan. 23—Sen. No. 19
Assem. No. 19 } Workmen's Compensation; medical abuses; joint hearing before Committees on Ways and Means, Judiciary and Labor.
- Jan. 29—Sen. No. 20
Assem. No. 20 } Workmen's Compensation; occupational diseases; joint hearing before Committees on Labor and Industry.

We are informed that insurance companies and insurance agents are soliciting the interest of physicians in opposing Senate and Assembly bills No. 18, the creation of an exclusive State Insurance Fund. As you are aware, it is our intention to oppose the advancement of these bills. We are pleased to have this opportunity of co-operating in opposing the bills, but it is well to remember that our friends, the insurance companies and agents, are the principal ones opposing the advancement of our hospital and physician lien bill. We recommend, therefore, that before pledging your co-operation, you ask them, in return, to withdraw their opposition to the lien bill.

BULLETIN NO. 3, JANUARY 24, 1935

The following bills have been introduced since the issuance of the last bulletin:

Senate Int. 270, Schwartzwald; Assembly Int. 199, Doyle, amends the County Law by empowering supervisors, except in a county constituting a general health district, to employ dentists as well as health nurses, etc. Referred to the Internal Affairs Committee.

This bill was introduced at the suggestion of the Department of Health.

Senate Int. 271, Schwartzwald; Assembly Int. 194, Doyle, amends the Public Health Law by empowering the health commissioner to order reasonable improvements for protection of water supplies found to be inadequate or of such objectionable quality as to constitute a menace to public health. Referred to the Health Committee.

This bill was introduced at the suggestion of the Department of Health.

Senate Int. 302, Twomey; Assembly Int. 498, Alterman, Public Health and State Finance Laws, authorizing the health commissioner to administer any grant, gift or bequest to be applied to maintenance and use of any hospital, institution or service in Health Department, all such grants and bequests to be paid to Taxation Department to be held there in trust. Referred to the Health Committee.

The Department of Health has had this bill introduced to give it legal authority to accept and dispense funds that may be offered for public health activities; as, for instance, at present the Rockefeller Founda-

tion offers financial assistance for the development of certain public health units.

Senate Int. 321, Esquirol; Assembly Int. 131, Breitbart, amends the Decedent Estate Law by providing an action for personal injuries may be brought after death of injured person or continued by his executors against the wrongdoer. Referred to the Judiciary Committee.

Senate Int. 357, Byrne; Assembly Int. 445, McDermott, adds new article to the Agriculture and Markets Law for governing sale and distribution of lye and other caustic substances in containers for household use. Referred to the Agriculture Committee.

This bill has been before the Legislature for a number of years. It is opposed principally by merchants who handle disinfectants.

Senate Int. 365, Crawford, amends the Civil Service Law by providing no person shall be appointed to position in classified service unless he is a citizen of the United States and has resided in state for at least two years, but such requirements may be waived for any individual or group if positions are in exempt or non-competitive class and if public interest demands such waivers. Referred to the Civil Service Committee.

Senate Int. 401, Esquirol; Assembly Int. 489, G. W. Stewart, adds new section to the Penal Law prohibiting sale of appliances, drugs or medicinal preparations for prevention of venereal diseases or used in gynecological hygiene, or advertisement or display thereof, except in places registered by State Pharmacy Board. Referred to the Codes Committee.

This bill was introduced at the suggestion of the Pharmaceutical Association. Preparations and apparatus of this kind are articles of trade, found at many places other than drug stores; for instance, gasoline stations, florists, beauty parlors, cigar stores, way-side lunches, and so on.

Senate Int. 409, Kleinfeld; Assembly Int. 551, Marasco, adds new section to the Education Law providing portion of street in front of physician's residence in each city or town shall be reserved as parking space for exclusive use of himself and persons visiting him professionally. Referred to the Education Committee.

The necessity for a law of this kind demands no argument.

Assembly Int. 321, Doyle, amends the Public Health Law by permitting a city at any time after three years to withdraw from a county health district; also providing that public health nurses must be qualified under regulation of Public Health Council, and for election of a vice-president as well as president of a county health board. Referred to the Health Committee.

This bill was introduced at the direction of the Department of Health.

Assembly Int. 344, W. Schwartz, amends the Public Welfare Law by reducing from 70 to 65 years, age at which person may

qualify for old-age relief. Referred to the Relief and Welfare Committee.

Another old-age pension bill which does not differ materially from those reported before.

Assembly Int. 371, Doyle, adds new section to the Lien Law for liens of physicians for care and treatment of persons injured as result of negligence of any other person or corporation. Referred to the Judiciary Committee.

This is the physicians' lien bill which the Committee on Legislation prepared and asked Mr. Doyle to introduce. The bill is identical with the Byrne bill (Senate Int. 208) except that it provides for physicians alone; hospitals and nurses are not included.

Assembly Int. 372, Doyle, amends the Health Law by providing at least two of six appointive members of the Public Health Council shall be physicians engaged in active clinical practice of medicine for at least five years prior to appointment. Referred to the Health Committee.

This bill was also prepared by the Committee on Legislation and introduced by Mr. Doyle at its request. It will be recalled that the House of Delegates instructed it to do so.

Assembly Int. 452, Rossi, adds new article to the Public Welfare Law establishing an old-age security fund consisting of contributions by members of fund, employers of labor, by gift or legacy, together with deficiency contributions by state and contributions by the United States Government; fund to be administered by board of state welfare commissioner, insurance superintendent, Attorney General, and two persons appointed by Governor, annuity to be \$50 a month on attaining age of 65 years. Referred to the Relief and Welfare Committee.

Another unemployment bill. It differs slightly from the others, particularly in the amount of the annuity.

Assembly Int. 461, G. W. Stewart, amends the Education Law by defining "laboratory," "clinical laboratory," "x-ray laboratory," for purpose of supervision and excepting therefrom qualitative or quantitative analysis of urine by a licensed pharmacist, and making certain other exceptions. Referred to the Education Committee.

This is the clinical laboratory bill that the Committee on Legislation prepared. It is similar to the other clinical laboratory bill except that it includes x-ray laboratories.

Assembly Int. 558, Sullivan, adds new section to the Labor Law making 8 consecutive hours in any 24 a legal day's work for nurses in public hospitals or hospitals supported in whole or in part by public funds. Referred to the Labor Committee.

Assembly Int. 559, Sullivan, amends the Public Welfare Law by requiring public welfare districts to give necessary medical care for all persons "making application"

and requiring appointment of an appropriate number of physicians for such purpose, on fixed salary, notwithstanding any restrictions in the Public Welfare Law. Referred to the Relief and Welfare Committee.

This amendment would make it almost necessary that boards of supervisors or other appointing bodies employ physicians for welfare work on salary rather than by the case method. Each year some attempt of this character is made. The law now does not prevent the appointment of physicians on contract or salary basis, but it specifically favors the case method, which provides the family with the services of its chosen physician.

May we recommend that every person receiving this bulletin advise his legislators regarding the action they should take upon these bills. Please advise upon all of them. If you need further information before you take action, we shall be glad to do what we can to inform you; but it is important that the legislators know the opinion of their constituents when they are called upon to vote, and again we remind you that the Legislature is acting very expeditiously this year. There is no time for delay; some of these bills are exceedingly far-reaching and will affect the practice of medicine materially. When you are writing, we would consider it a great favor to have copies of your letters sent to our Legislative Bureau.

HEARINGS

Jan. 29 — Sen. 20 — {Occupational disease
Coughlin bill; hearing before
Assem. 20—McCaffrey } Joint Committees on
Labor and Industry.

Hearings were held yesterday on bills No. 18 and No. 19, the compulsory State Insurance Fund and medical abuses bills, respectively. Enormous crowds filled the Assembly chamber in opposition to the State Insurance Fund proposition. Its only proponents were the Department of Labor and organized labor. The arguments presented against the bill appeared to us very damaging and it seems altogether unlikely that the bill will be advanced in its present form.

In the Senate chamber, where the hearing on medical abuses was held, the Committee first listened to arguments pro and con on the child labor amendment to the Constitution. Arguments were very spirited and lengthy; the hearing did not close until 7:30 p.m. and it was immediately followed by the hearing on the medical abuses bill, which did not terminate until after midnight.

Opponents of this bill were representatives of the Clinical Laboratory Association, the Public Health Laboratory Association, Associated Industries, and insurance companies.

(Continued on page 139)

Current Comment

President Roosevelt's message to Congress on Social Security, on January 17, said: "I am not at this time recommending the adoption of so-called health insurance, although groups representing the medical profession are co-operating with the Federal Government in the further study of the subject and definite progress is being made."

A message on this topic is indicated as due about March.

As we go to press, news from Albany would seem to indicate that the bill confining Workmen's Compensation Insurance to the State Insurance Fund and self-insurers, and which would deprive all private insurance companies of this business, will not pass. The profession, as well as other interested parties, have objected to its enactment.

If the wage deductions necessary for the old age pension program of President Roosevelt is added to the wage deduction that the intended Health Insurance program would necessitate, the wage-earner would find it necessary, either to lower his standard of living, or to ask for a wage increase! When the contributions of employers are considered, an added wage increase would make for the increase in the costs of commodities to the public. There are implications in all this that require more deliberation than just the few weeks that the public hearings on these measures permit. Whither are we heading?

* * *

Compulsory Health Insurance Cat Now Out of the Bag

The health insurance bill that is to be presented to Congress and to the 43 State legislatures now convening, and railroaded through them if possible, is out in the open, and it can now be seen what the socializers of medical care propose.

Lawmakers at Washington and at the various state capitals will now be told what to think, how to vote. The bill is the work of the "American Association for Social Security," with offices at 22 East 17th Street, New York City. Among its officers are Miss Jane Addams, Bishop Francis J. McConnell, Alfred I. DuPont, Glenn Frank, John A. Lapp, I. M. Rubinow, and Herbert S. Bigelow. The bill itself was drawn up by Prof. H. A. Gray of the New York University Law School, assisted by Edwin E. Witte, secretary of the President's Committee on Social Security, and by Abraham Epstein, executive secretary of the New York

association. On the advisory committee were two doctors—not engaged in general practice—Dr. Haven Emerson and Dr. Alice Hamilton.

Essentially, the bill provides compulsory health insurance for the great proportion of those earning less than \$3,000 a year. In case of illness, they would receive cash benefits for disability, maternity benefits, and medical benefits. The medical benefits would include the service of a general practitioner, general and special hospital treatment, nursing care, surgical treatment, dental treatment, and services of laboratories and clinics. The physicians, hospitals, and so on, are to be selected by the patient from a list of those willing to serve, and the physicians of each locality, by majority vote, would determine the method of their compensation.

The administrative machinery which is to run the scheme provides for a network of paid appointees that may well make politicians smile and taxpayers gasp. First there would be a state health insurance commission, with advisory councils, boards of adjustment and appeal, clerical force, and what not. Then the state would be divided into districts, with district councils, boards, committees, clerical force, and so on, and under them would be the local offices, with local medical and financial agents, inspectors, and workers. The cost of all this machinery for a state like New York would be terrific, all on the plea of reducing the cost of medical care!

Funds for financing the scheme are to be raised by compulsory contributions from the employed, the employer and the state, varying with the scale of the worker's pay. The three contributions together would amount to 6 per cent of the worker's wages. It need hardly be said that a golden tide of 6 per cent of the worker's pay of New York State rolling into a central fund annually is enough to make the politicians' mouths water.

The final object of all this is to let Frank Hogan, when he is sick, go to a clinic or hospital, or to Dr. Smith's office, and have the medical care he needs—exactly what he does now, without all the maze of job-holders provided by his bill. If the cost is to be cheaper than now, where is the difference to be taken out? The answer is as clear as daylight. There is only one place where it can come out, and that is out of the doctor. The doctor will be systematized and machinized to the point where he will be seeing patients as fast as they can pass through his hands, at a pittance each, under the orders of a political superintendent or inspector who can perhaps ruin his prac-

tice if he votes the wrong ticket or fails to contribute enough to the party treasury. This congestion of patients into a few hands, too, can only mean that doctors who are out of favor will also be out of luck, and while some are overcrowded, others will have little or nothing to do. The present plan of fair and honest competition, where each doctor gets what he is able to win, is certainly more American and more likely to give both doctor and patient the best results.

There have been no reports of mass meetings or petitions of wage workers asking for any scheme of this kind, and the general feeling of the medical profession is flatly against it. It seems to be hatched from the brains of the managerial meddlers who are bent on running the country and imposing hare-brained ideas that used to engage the imaginations of high-school debaters. If the lawmakers are informed of the wishes of the doctors in this matter, no doubt it may be shelved, but if nothing is done, it may get by, and great damage may be done.

The issue is joined. The war is on. Opposition to the measure has been recorded not only in New York State but in many other States.

Motor Crashes That Injure the Doctor

If one peers about among the wreckage of a motor smash-up, one will not usually see a doctor lying there with a broken leg or with scrambled interior arrangements, but he is often among the injured, for all that. The victims are rushed to the hospital or to the doctor's office, the medical man gives of his time and skill, lives or limbs are saved, and then the doctor is blandly told: "It was the other fellow's fault. Send your bill to him." So the final sufferer is the doctor, who gets his injury in healing that of the victim.

Some people seem to think that insurance covers everything, but the fact is, that only 25 per cent of the automobiles in this country are covered by liability insurance. A moment's thought, too, will show that this does not mean that one-quarter of all accidents are covered by insurance, for two cars usually figure in every wreck, and the likelihood that both are in the list of insured whittles down to a slim chance. The probabilities are good (or bad) that the doctor will have no recourse to insurance whatever. A good plan is to secure the license numbers of both cars from the police and file a claim with both parties at the earliest date possible—then the doctor will figure in any settlement made, and will at least have as good a chance as the mechanics who straighten the fender or tow the wreck to the dump. They always get their pay; why shouldn't the doctor have his as well?

In cases covered by insurance policies, a plan has been perfected in Indiana to protect the doctor's interests, formulated by joint committees representing the insurance companies and the State Medical Association. Under this plan a form has been drawn up, to be signed by the injured party, ordering the insurance company, in case a cash settlement is made on account of his injuries, to pay the doctor's bill. The physician, as soon as the amount due for his services can be figured, presents the order to the insurance company and, if all is in order, the bill is paid.

Furthermore, to lubricate the friction of misunderstanding with the oil of goodwill, a standing committee representing both the insurance and the medical interests has been set up to heal any conflicts and grievances that may arise. The plan has been in operation for two years, and the chief complaint is that too few of the doctors avail themselves of it.

It is at least clear from this Indiana instance that the insurance companies stand ready to do all they can to help the doctors recover their just dues for their services. They will, in fact, be wise to do so, for when the doctor saves a life or heals what would be a crippling injury, he saves the insurance company the payment of damages that might run into high figures. Motorists and insurance companies alike will do well to see to it that the medical man is honestly paid for repairing the human wreckage in these motor crashes. His modest fees represent a small fraction indeed of the value of his services. True, there is not the slightest danger that he will ever go on strike or refuse to aid the injured, but it seems scarcely necessary to say that it will be worse than foolish to do what is too often done now—accept his services and then leave him cheated and injured financially.

Medico-Dental Teaching—Graduate and Undergraduate

The fourth annual Joint Medical-Dental Meeting, arranged by the five County Medical Societies and the two District Dental Societies of New York City, was held on December 3, 1934, under the auspices of the "Better Dentistry Meeting." The morning session was devoted to a consideration of present arrangements in medical schools and dental schools for teaching of conditions with both oral and systemic phases. The term "Medico-Dental Teaching" has grown into use to indicate this type of professional education.

At the session, the Secretary of the Joint Committee in charge, Dr. M. O. Magid, gave a brief description of the inception of combined meetings between the two professions,

Current Comment

President Roosevelt's message to Congress on Social Security, on January 17, said: "I am not at this time recommending the adoption of so-called health insurance, although groups representing the medical profession are co-operating with the Federal Government in the further study of the subject and definite progress is being made."

A message on this topic is indicated as due about March.

As we go to press, news from Albany would seem to indicate that the bill confining Workmen's Compensation Insurance to the State Insurance Fund and self-insurers, and which would deprive all private insurance companies of this business, will not pass. The profession, as well as other interested parties, have objected to its enactment.

If the wage deductions necessary for the old age pension program of President Roosevelt is added to the wage deduction that the intended Health Insurance program would necessitate, the wage-earner would find it necessary, either to lower his standard of living, or to ask for a wage increase! When the contributions of employers are considered, an added wage increase would make for the increase in the costs of commodities to the public. There are implications in all this that require more deliberation than just the few weeks that the public hearings on these measures permit. Whither are we heading?

* * *

Compulsory Health Insurance Cat Now Out of the Bag

The health insurance bill that is to be presented to Congress and to the 43 State legislatures now convening, and railroaded through them if possible, is out in the open, and it can now be seen what the socializers of medical care propose.

Lawmakers at Washington and at the various state capitals will now be told what to think, how to vote. The bill is the work of the "American Association for Social Security," with offices at 22 East 17th Street, New York City. Among its officers are Miss Jane Addams, Bishop Francis J. McConnell, Alfred I. DuPont, Glenn Frank, John A. Lapp, I. M. Rubinow, and Herbert S. Bigelow. The bill itself was drawn up by Prof. H. A. Gray of the New York University Law School, assisted by Edwin E. Witte, secretary of the President's Committee on Social Security, and by Abraham Epstein, executive secretary of the New York

association. On the advisory committee were two doctors—not engaged in general practice—Dr. Haven Emerson and Dr. Alice Hamilton.

Essentially, the bill provides compulsory health insurance for the great proportion of those earning less than \$3,000 a year. In case of illness, they would receive cash benefits for disability, maternity benefits, and medical benefits. The medical benefits would include the service of a general practitioner, general and special hospital treatment, nursing care, surgical treatment, dental treatment, and services of laboratories and clinics. The physicians, hospitals, and so on, are to be selected by the patient from a list of those willing to serve, and the physicians of each locality, by majority vote, would determine the method of their compensation.

The administrative machinery which is to run the scheme provides for a network of paid appointees that may well make politicians smile and taxpayers gasp. First there would be a state health insurance commission, with advisory councils, boards of adjustment and appeal, clerical force, and what not. Then the state would be divided into districts, with district councils, boards, committees, clerical force, and so on, and under them would be the local offices, with local medical and financial agents, inspectors, and workers. The cost of all this machinery for a state like New York would be terrific, all on the plea of reducing the cost of medical care!

Funds for financing the scheme are to be raised by compulsory contributions from the employed, the employer and the state, varying with the scale of the worker's pay. The three contributions together would amount to 6 per cent of the worker's wages. It need hardly be said that a golden tide of 6 per cent of the worker's pay of New York State rolling into a central fund annually is enough to make the politicians' mouths water.

The final object of all this is to let Frank Hogan, when he is sick, go to a clinic or hospital, or to Dr. Smith's office, and have the medical care he needs—exactly what he does now, without all the maze of job-holders provided by his bill. If the cost is to be cheaper than now, where is the difference to be taken out? The answer is as clear as daylight. There is only one place where it can come out, and that is out of the doctor. The doctor will be systematized and mechanized to the point where he will be seeing patients as fast as they can pass through his hands, at a pittance each, under the orders of a political superintendent or inspector who can perhaps ruin his prac-

- (a) Teeth are almost wholly devoid of capacity for peripheral self-repair, which emphasizes the paramount importance of measures for the prevention of dental disorders, especially in children.
- (b) The protective enamel does not heal after removal, is not restored
- (c) The most prevalent dental disorders are usually not curable with drugs, but once under way, as a rule, can be remedied or repaired solely by medical means
- (d) All the teeth can be removed without serious effect on the functions of the jaws or the welfare of the body, so far as the removal itself is concerned, for,
- (e) unlike the many organs of vital chemical coordination, the teeth secrete nothing having any functional value elsewhere in the body
- (f) Sanitary substitutes for natural teeth, or for parts of a tooth, can be mechanically adapted esthetically for comfortable and effective maintenance of all the dental and vocal functions. The circumstances just stated (a-f) show a concurrence, in the teeth of these biological conditions (a-b) relative incapacity for repair, (c) relative incurability by medicinal treatment, (d) ready recovery from effects of total loss, (e) non participation in systemic chemical coordinations, and (f) esthetic and mechanical sufficiency of functional restorations attainable by artificial replacements. This concurrence of conditions which does not occur in any part of the body containing blood and nerves, accounts in part for the traditional unconcern among physicians regarding dental disorders, and have justified the development and maintenance of dentistry as a separate organized profession

4. The conditions just indicated (group 3) give to dental service—in its important relation to the maintenance of health and comfort, the amelioration of mechanical and functional disabilities, and to esthetic requirements—a quality that, in the interest of the patient, demands special training, understanding, and proficiency, which cannot be included either in medical education or in medical practice. Doctors of medicine who do not recognize this important fact, and who do not accord to dentists the professional credit their status and health service deserves, are seriously at fault from every consideration of medical responsibility. The patient needs oral health service, even when his dental disorders are not as serious or as urgent as some other ailments. The physician has not been educated to give the needed dental service. But the physician owes the dentist—who has not been educated for the systemic function—that degree of fraternal helpfulness which all licensed and ethical servants of the public health should cheerfully, fairly, and responsibly accord to one another. The welfare of the patient presents the paramount obligation, and points out the essential consideration, in interprofessional relationships. Let us hope that the realities of the patient's needs, the requirements of effective service in the patient's behalf, and the opportunities and responsibilities of licensed health servants to help the patient, will bring physicians and dentists together, in the patient's interest whenever either practitioner

needs the aid of the other in common effort to this end

Turning, now, from introductory generalities to the content of Dr. Magid's report I quote a statement from the Carnegie Foundation's Annual Report, for 1930, to serve as a basis for comparison of my own general findings four years ago with Dr. Magid's this year

'The accompanying summary presents an indication of the lack of concern in the medical school in the United States in 1929-30, about the 'medical part' of dentistry

Data relating to required instruction in dental relationships in United States schools of medicine in 1929-30

- 1 Number of schools in which there are no required courses of instruction in oral hygiene, clinical dentistry or oral surgery—37
- 2 Number of schools in which there are no required courses of instruction in oral hygiene, clinical dentistry or oral surgery but in which casual instruction on dental (oral) conditions is included in required courses or clinical work in other relations—29
- 3 Number of schools that give required courses or groups of lectures on various aspects of dentistry, the time allowance ranging between four and fifteen hours (average 8 hours in 4 years)—15
- 4 Total number (including the 6 proprietary schools)—81
- 5 Number of schools in Group 3 in 1924-25—a gain of 6 in 5 years—9

'If the interest in the 'medical part' of dentistry continues at its present rate of growth in the medical schools in the United States, and if the number of schools remains the same, then it may be expected that by 1985 all of the medical schools will devote an average total of eight (clock) hours in the entire curriculum to required work in dental and oral relationships"

This statement, four years ago, indicated that only fifteen medical schools in the United States, i.e., less than one in five, then gave required courses or groups of lectures on some aspects of dentistry, and that the time reserved by this small number of schools ranged between only 4 and 15 clock hours (average, 8 hours) in the entire curriculum for the M.D. Degree

The medical schools in group 3 are Boston, Cincinnati, Creighton, Detroit, Emory, Georgetown, Kansas, Marquette, Medical Evangelists', Minnesota, New York Homeopathic, Ohio State, Oregon, Temple, Washington

Before beginning a direct discussion of Dr. Magid's report, let me remind you of the fact that the use of questionnaires to elicit information is usually unsatisfactory, not only to those who issue the questionnaires but also to those who respond to them. Those who receive questionnaires commonly feel that an annoying burden has been placed upon them, usually find something particularly distasteful in referring to deficiency, feel that they are on the defensive, and think of responses that will be protective. The replies are recorded without an observer being present to check the validity, and therefore are often careless, evasive, incomplete, grandiose or otherwise misleading. The questions are often ambiguous, superficial, confusing, or inadequate to elicit pertinent information. I believe you will agree that the responses to the questions as brought out in the report made it possible for Dr. Magid to present a clear picture of realities. A more effective way for your organization to proceed if it wishes to obtain accurate information on the matters to which the questions relate would be to have a representative visit the lead-

ing institutions and ascertain, by direct inquiry and observation, just what is being accomplished and then report it to you comprehensively and judicially from the standpoint of all the facts reliably determined. I shall refer briefly and frankly, in the spirit of the preceding remarks, to the questions in Dr. Magid's report and to the responses thereto.

I. The first inquiry in the questionnaire was this: "Does the curriculum in your medical (or dental) college include theoretical or bedside teaching which aims to stress a *possible* relationship between oral and systemic diseases?" The summarized numerical returns were these:

	Report		Speakers additions	
	Yes	No	No response	Total
Medical schools.....	46	24	17	87
Dental schools.....	23	1	20	44
Total	69	25	37	131

This first question refers to "theoretical or bedside teaching," and may be truthfully answered "yes" where only either kind of instruction is given. The question ignores the extent and the quality of the instruction. Since a few incidental remarks to students, intended "to stress a *possible* relationship," etc., would enable a school to answer Yes, it is surprising to find that 24 medical schools answered No.

II. The second inquiry in the questionnaire reads: "How many years has your medical (or dental) college been giving dental (or medical) instruction?" The replies ignored the fact that the question refers directly to *number of years* during which the indicated instruction has been given, the response showing merely that there was or was not much instruction. In short, the answers were not responsive to the question but indicated something else. The summary of these miscellaneous responses, to something other than the main point in the question, were summed up as follows:

	Report		Speakers additions	
	Yes	No	No response	Total
Medical schools.....	36	34	17	87
Dental schools.....	10	11	23	44
Total	46	45	40	131

III. The third question reads: Does your college offer a combined course on medicine and dentistry? If not, have you any plan or plans to suggest for such instruction? The responses, evidently for only the first half of the question, are given as follows:

	Report		Speakers additions	
	Yes	No	No response	Total
Medical schools.....	7	63	17	87
Dental schools.....	0	22	22	44
Total	7	85	39	131

The question does not indicate what is meant by "combined course in medicine and dentistry"—whether, for example it refers to a combination of courses leading to one degree of two degrees in *undergraduate* training, or to one or more degrees in joint *graduate* work. Possibly nearly all the schools assumed that "combined course" in the question meant a combination of undergraduate medical and dental curricula leading to *both* the M.D. and D.D.S. degrees.

IV. The fourth question is this: "Does your college offer postgraduate instruction in medical and dental subjects emphasizing the relationship between the two professions in caring for the 'common' patient?" The responses were:

	Report		Speakers additions	
	Yes	No	No response	Total
Medical schools.....	12	58	17	87
Dental schools.....	9	13	22	44
Total	21	71	39	131

This question is restricted to postgraduate instruction, and places the emphasis and purpose on joint care of the "common" patient. But what is meant, in the question, by the word "common," with its quotation marks? Does the quoted word mean ordinary patient or average patient, or the patient who may need the joint ministrations of both physician and dentist, the one practitioner consulting the other? This question was probably variously interpreted, which may explain the small number of affirmative responses.

It is said, in the report, that "out of 140 questionnaires, 70 medical colleges and 25 dental colleges responded"—i.e., 95 (75 per cent) in a total of 131 such accredited colleges in Canada and the United States. I assume that the six proprietary medical colleges in the United States were not included. One statement in the report suggests that possibly nine additional copies of the questionnaire were sent to persons who did not represent colleges. Some of the most influential medical and dental schools are not represented in the replies, thus diminishing the relative significance of the outcome. In an effort of this kind, to be useful, all of the most important schools should be represented in the opinions. Unfortunately, also, each of the four questions was inadequate, both in form and import. The responses do not provide clear or definite indications of realities. The numerical summaries are mathematical in appearance only, not in fact. If the figures mean anything they suggest that the practical interest in medical schools, in imparting to medical students a working understanding of what might be called the "medical part of dentistry," is just what it was in 1930 or less. An examination, in the report, or the individual quotations from the questionnaires confirms this opinion. An element of humor for me in these replies is the fact that some of the representatives, in saying what they are about to do to correct deficiencies, stated almost verbatim what they wrote some years ago. A number of the replies contain views that, because of their general significance, ought to be emphasized. I quote a few as follows:

UNIVERSITY OF ILLINOIS: "I am writing to you because I feel . . . the questionnaire is misleading."

ST. LOUIS UNIVERSITY MEDICAL SCHOOL: "This questionnaire . . . has revived my interest in the dental internship in the University Hospital, of which we have been speaking for several years, but which has this far failed to materialize."

TULANE UNIVERSITY MEDICAL SCHOOL: "The dental instruction that is available and the dental service to patients through the dental profession (in New Orleans where there is a dental school in Loyola University) are entirely inferior to warrant more time in the curriculum (now admittedly inadequate) nor more effort to utilize dental teaching at the present time."

INDIANA UNIVERSITY DENTAL SCHOOL: "Hope to institute medical instruction in [the] dental school. Medical faculty [is] hard to convince."

UNIVERSITY OF PITTSBURGH DENTAL SCHOOL: "Dental school has offered courses in dental pathology to [the] medical, but [there has been] no acceptance [by the medical school]."

Let me assure you that, in presenting this criticism of the questionnaire and of the report, my purpose is wholly constructive. I have referred to weaknesses in order to strengthen all your future endeavors. I am anxious to help make your efforts effective.

Very recently I received, from a student of medico-dental relationships, a manuscript containing the following sentence: "The academic intercourse between the dental and medical schools (in the United States) is still in most places casual, superficial, and insincere." This conclusion agrees with the obvious facts in the situation. I urge you to face realities, and to increase your endeavors actively to stimulate further growth of co-operation between the two professions. Questionnaires regarding what is being done yield instructive responses only where constructive activity is in progress. Accord between the two professions, although growing, is like many vital processes—the reaction needs catalytic acceleration. "The Organized Medical and Dental Professions of Greater New York"—under whose auspices this convention is being held—should serve as an enzyme . . . I believe your fervent . . . the following four main . . . ro-ductive of distinguished results:

1. After due study, formulate a statement of the principles and conditions which, in your judgment, the faculties of medical and dental schools should establish to promote understanding, in medical dental students, of the responsibilities and opportunities of physicians and dentists to co-operate in behalf of the patient.

2. Forward to each medical and dental school, and to the Council on Medical Education, a copy of the statement thus formulated. With the statement send two requests: one asking for reasons, if any, why the proposed plan could not be made operative; another asking for suggestions of improvement of the plan.

3. Send, to each of the schools and councils, copies of the replies to these two requests.

4. Meanwhile, and as a closely related supplementary endeavor, compile a clear and factual statement of the efforts actually being made, and

the ensuing results in some of the leading medico-dental centers to promote knowledge and understanding, among medical and dental students, of the mutual obligations of physicians and dentists in practice and co-operation. Send copies of this compilation to each of the schools and councils. In this effort, medico-dental conditions at the following illustrative universities—as ascertained directly by you or for you—would be particularly instructive and useful, either positively or negatively: California, Chicago, Columbia, Cornell, Harvard, Johns Hopkins, Michigan, Northwestern, Oregon, Pennsylvania, Rochester, Tulane, Washington, Western Reserve, Yale.

If you directed your efforts, soon and effectively, in accordance with or in extension of the program just indicated, your committee in charge of these matters would, I believe, be able to present a very constructive report at your next annual convention, as a basis for further action. . . . You are engaged in an effort to promote a very worthy cause.

Following general discussion the Session formally adopted the following Resolution:

WHEREAS, The report indicates that there is not a uniform inclusion of medico-dental subjects in the curricula of undergraduate and postgraduate teaching in the medical and dental schools in United States and Canada, and

WHEREAS, The Joint Committee firmly believes that in the interest of public health, subjects having a medico-dental relationship should be taught in the medical and dental schools; and opportunities should be offered for postgraduate study of the relationship of Oral Diseases to Systemic Diseases, therefore, be it

Resolved, That the chairman should appoint a special committee to draft "standards" for a minimum course of study in interrelated medico-dental subjects to be taught in the medical and dental colleges in the United States and Canada, and be it further

Resolved, That when the standards are prepared, the Joint Committee shall submit them to the: (1) American Association of Medical Colleges; (2) American Association of Dental Colleges; (3) Faculties of the Medical and Dental Colleges in the United States and Canada, for their study and recommendation.

SOCIETY ACTIVITIES

(Continued from page 133)

Laboratory representatives objected particularly to the requirement of the bill that the laboratories be owned by physicians. The public health laboratories' objection was that the bill would be establishing a standard of efficiency lower than that which the State Department of Health requires at present. Associated Industries and the insurance companies directed their principal objection to the free choice clause. The proponents of the bill were the Department of Labor, organized labor, the New York Academy of Medicine, and the State Medical Society. Dr. Aranow presented the Society's approval. It is possible that slight changes will be

made in the bill before it is advanced, but there is no doubt but that it will be advanced to debate on the floor of both houses. It was suggested by the chairman of the committee of the hearing that the proposed amendments or changes be prepared immediately so that the committee can take final action on the bill not later than next Wednesday.

HARRY ARANOW
B. B. BERKOWITZ
B. WALLACE HAMILTON
JAMES F. ROONEY
LEO F. SIMPSON
Committee on Legislation

County Societies

Franklin County

A splendid example of the old-time general family doctor passed away in December when Dr. Watson H. Harwood, 81, a physician at Chasm Falls for nearly 55 years, died in the Alice Hyde Hospital at Malone.

Dr. Harwood, a son of Mr. and Mrs. Hiram Harwood, of North Bangor, was born in that town and was graduated from the University of Vermont Medical College. He established his practice in Glen Hope 53 years ago when the settlement was little more than a wilderness. He was instrumental in having the name changed to Chasm Falls. Most of its residents were brought into the world by the old doctor. For many years he made the breeding of fast horses and fancy poultry his chief hobby.

Kings County

The Kings County Medical Society loses one of its veteran members in the death of Dr. Henry J. Brewer, a former coroner in Brooklyn and one of the borough's oldest physicians, at the age of 88 years. He was born in this city and during the Civil War he joined the navy and saw service with the South Atlantic blockading squadron. After the war he attended the Long Island College Hospital where he received his medical degree in 1881. He retired about ten years ago after forty years of practice.

Dr. Brewer was at one time Democratic leader of the Seventh Assembly District and belonged to Winchester Post, G. A. R., Orion Lodge 717, F. and A. M., and the Medical Society of the County of Kings. His widow, Mary L. Brewer; a daughter, Elizabeth T., and two sons, Walter and William T. Brewer, survive.

On the recommendation of the Board of Superintendents a program of x-ray examinations will be begun shortly to discover incipient childhood types of tuberculosis among high school students. For the present the examinations will be limited to third and fourth-year students in Brooklyn high schools. They will be conducted by specialists under the joint auspices of the Department of Health, the Board of Education, the Kings County Medical Society and the Brooklyn Tuberculosis and Health Association, and will be similar to examinations given during the last three years to more than 15,000 elementary school children in Manhattan and Queens.

Of the 15,000 elementary school children—all seemingly well and strong—who were examined with the tuberculin test during the last three years, an average of twenty-eight in every 100 showed that they were infected with the germ of tuberculosis, it is disclosed.

Monroe County

The Monroe County Medical Society is carrying out a special plan to provide eye examinations for a group of indigent children who could not obtain attention at hospital outpatient departments. A survey reported in the *A.M.A. Journal* showed that 1,210 children were in need of refractions and that the hospitals would not be able to accommodate them for many months. The medical society in conference with the public safety and public welfare committees of the city council agreed to make the examinations for the sum of \$2,420, all to be completed by the end of 1934. Between September 15 and November 1, members of the society had completed 575 refractions. Glasses are to be furnished by the department of public welfare and various lay organizations.

Montgomery County

It may seem to some a bit incongruous to open a sewage disposal plant with dedicatory exercises, but when we think what such a plant means to a community in the way of saving health, it appears to be just about the right thing to do. At any rate, that is how they opened the new one in Canajoharie. We can understand the local feeling when we learn that for many years the village has discharged untreated sewage into Mohawk river and has maintained a public dump for disposal of its garbage and refuse. The dump especially has been the subject of many complaints in the past. The new plant was built with federal aid through the PWA. The incinerator is designed to handle twenty-one tons of garbage and refuse per day but normally will operate only about eight hours per day. Due to the large quantity of combustible material in the refuse from the village it is not expected that any auxiliary fuel will be required.

Nassau County

One of the most interesting attempts to organize the physician's time for more effective charity work is the Children's Health Hour, says the *Nassau Medical News*. Not original in this county, it has nevertheless

been given sufficient local trial to demonstrate its essential soundness as a means of solving local problems. In several Nassau County communities local physicians have established special office hours for the purpose of handling a drive to secure immunization of the children of the community against diphtheria. The local health authorities and visiting nurses have done the publicity work, which included house-to-house visiting of parents of preschool children, and the local doctors have done the immunizing in their own offices. Children able to pay full fees are handled at the usual office hours, all others are directed by the public health nurse to select a co-operating physician and go to his office at the special "Children's Health Hour" where the work will be done at a reduced fee or for no fee at all if the nurse decides the family is unable to pay.

So far this has been but a temporary arrangement and has been available in but a few communities. The profession has been able to announce, however, a similar plan to be county-wide in its extent and on a permanent basis. This particular project is the securing of eye examinations and treatments for school children. If the program is as much of a success as it has been in other communities, it is hoped that the "Children's Health Hour" may be extended to other fields of practice and to adults as well as children, thus making it unnecessary for any indigent patient either to suffer from neglect or be compelled to put up with makeshift or indifferent care. The doctors are still perfectly willing to carry the load of medical charity; they ask only two things, first that they shall be protected against the individual who seeks charity medical care when able to pay his own way, and second that they be given the help of the other interested groups to the end that the care may be given at the least practicable expense both of time and effort.

New York County

A fine tribute to Dr. Franklin Welker, the new President of the New York County Medical Society, appears in the *New York Medical Week*, which remarks that in "the controversy ranging about medical practice there is one point on which almost all are agreed. The general practitioner must be the dominant factor in medicine, the co-ordinator of all the special work required in a given case. Trained in the laboratory sciences, he must be essentially a clinician. Possessing the therapeutic skill of his great predecessors, he must be interested and adept in preventive measures. Such is the doctor of the future—and such is Dr. Franklin Welker.

"Long years in general medicine have given Dr. Welker a sympathetic insight into the

problems which the practitioner must face from day to day. He combines a deep realization of the profession's obligations to the public with a firm belief in the physician's right to professional independence and economic security. Possessed of a quiet courage that does not waste itself in bluster, he will not give ground to those who seek to exploit the doctor under the guise of various so-called reforms.

"Dr. Welker has spent many years in the service of the County Society, acting in many different posts. As president he will be aided by officers and committeemen who also are thoroughly familiar with the problems before them. Both the personnel and the experience of the 1935 administration are such as to inspire the confidence and support of the membership."

Schoharie County

It was a strange coincidence that Dr. Christopher Best, of Middleburgh, who died in December, at the age of 82, was stricken just after treating a local jeweler who was his first patient when he started practice there in 1876.

Dr. Best was active in professional organizations and civic affairs. During his life he was President of the Board of Education, director of the Middleburgh and Schoharie Railroad, President of the Middleburgh Telephone Company and Senior Elder of St. Mark's Lutheran Church of Middleburgh.

He is survived by his wife, two daughters, Mrs. E. B. Vroman and Miss Emma Best, and one son, Dr. Duncan Best, all of Middleburgh.

Suffolk County

One of the staff nurses of Suffolk County recently visited a home where the mother had given birth to a child. The nurse asked the mother if she was nursing the baby. The mother replied, no, that the doctor had ordered a new food. Asked what it was, the mother said "Wild animal's milk." The nurse, somewhat startled, asked if that was a new kind of food and what it was like. The mother said it came in a can and showed the nurse a can with the picture of a wild animal on it, a standard brand of evaporated milk.

Westchester County

A pair of office thieves have been victimizing physicians in Westchester and neighboring counties. These two worthies call on the doctor at a time when his office is devoid of patients—no unusual situation in these days—and then, while one of them is taken into the private office, the other proceeds to "get away" with everything available.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Operation Without Consent—Surgeon's Right to Operate in Emergency

The extent to which a surgeon may act in an emergency was the subject of an interesting case* decided by the courts of one of the Middle Western States.

The plaintiff in the case was a boy, 15 years of age. While crossing a railroad track he was struck by a locomotive and severely injured. His principal injuries were to his left foot. He was promptly taken to a nearby hospital in an ambulance. Upon arrival there he was partly conscious and was able to tell his name and address to the attending surgeons. About ten minutes after admission to the hospital, however, the boy lapsed into a comatose condition, followed by complete unconsciousness. Attempts were unsuccessfully made to revive him by injections. His injuries were promptly examined by the house doctors, and he was found to be suffering from a compound disarticulation of the bones of the foot. The scaphoid bone was torn away entirely and much of the flesh was torn away from the top of the foot so that the muscles, ligaments, and bones were exposed.

After examination the house physicians concluded it was a case for immediate surgical procedure and they notified the defendant, an experienced surgeon, who came to the hospital without delay. The defendant found the boy unconscious, with a poor pulse. He found the injured foot to be apparently cold and dead, with its circulation interrupted. The defendant inquired as to the whereabouts of his parents or other relatives of the boy, and was told that none were available. He thereupon held a consultation with the four house physicians who had examined the patient, and it was agreed that immediate amputation of the foot was necessary to save the boy's life. The operation was performed without further delay by the defendant. The patient had an uneventful recovery.

Sometime later an action for damages were begun against the surgeon upon the theory that under the circumstances, it

was not proper for the surgeon to amputate the foot. The claim was made that it was unsound medical practice for the defendant to amputate the foot at all, and that in no event should it have been amputated without first obtaining the consent of the patient or his parents.

Upon the trial of the action the plaintiff called three medical witnesses on his behalf, all men of considerable experience and they gave testimony upon their direct examination that, having examined the foot after it had been amputated, it was their opinion that the foot could have and should have been saved. The force of their testimony was broken down upon cross-examination, as will be seen from a few passages from the testimony so elicited from them by the defendant's attorney.

The first of the said experts gave the following testimony:

Q. Suppose the injury was so severe that the circulation had ceased, would you clean the wound and leave it? A. If the bone were all crushed and the parts all torn, and I saw no chance, I would amputate.

Q. Would you form your own opinion and judge whether amputation was necessary or not? A. I would call in counsel. I would not rely upon my own judgment. I would talk it over. Other people might see things differently than I did. Surgeons have differences of opinion. With proper consultation, it is a question which is the best course to follow under certain circumstances. I would call at least one surgeon, and if I was not satisfied with his statement, I would call another. We would talk it over and consider it.

Q. Would you take their judgment? A. Certainly we would talk it over and consider it. We are often in doubt in medicine. * * *

Q. A surgeon must determine, must he not, when an amputation shall be performed, and form his judgment from all the circumstances of the case. A. I will answer that, "yes." After he takes all the facts into consideration, then he may be wrong in his judgment.

Q. And it is up to him therefore to determine from what he can learn of the case, and what he can see of the injury, to what

* *Luka vs. Lowre*, 136 N. W. 1106.

extent the danger of blood poisoning is imminent. A. Yes, sir.

Another physician called by the plaintiff gave the following upon his cross-examination:

Q. Assuming that the man was a competent surgeon and he was called in to attend this case, he would have to rely upon his best judgment? A. Yes, sir.

Q. Taking everything into consideration. A. Yes, sir. * * *

Q. You would have a good deal more faith in your own opinion if you had attended the boy at the time? A. Yes, sir.

Q. You would have a good deal more faith in some other competent surgeon's opinion that had attended the boy at the time? A. Than what?

Q. Than your own now? A. Of course, a competent surgeon attending it.

Q. His opinion would be better than yours? A. Yes, I think it would.

A third doctor called as an expert by the plaintiff, in the course of his cross-examination, gave the following testimony:

Q. If as a skilled surgeon you had seen the patient, seen the foot torn and open, and observed his condition, his pulse and all that, and you concluded that the operation was immediately necessary, would you feel that your opinion was better and more apt to be correct than that of a surgeon or doctor who saw the foot after the amputation had taken place. A. That can be answered in this way: That a man that made all those examinations and saw it, he might not be as competent after that to judge as some one else who had more experience and had seen these things oftener, and yet he might be absolutely correct, but his chances would be superior, undoubtedly, to the man who did not see it. Still, although the foot afterwards might not indicate the necessity for amputation, yet the necessity may have existed.

Q. A surgeon who saw it afterwards would not know anything about it afterwards, whether it was necessary or not? A. He would not know whether it was necessary for amputation so far as that is concerned, but the question would be whether an immediate operation would be necessary; that would be the question. * * *

Upon the trial the proof was contradicted to the effect that the circulation of the patient's foot was completely interrupted before the operation, that he was in a profound coma, and that death from shock frequently follows severe traumatic injury. The defendant's contention that immediate amputation was necessary to save the boy's life was borne out by the testi-

mony of two surgeons of wide experience, called by him as experts.

The plaintiff upon the trial failed to present any testimony to establish that if the parents had been present at the hospital before the operation was performed they would have refused their consent to the operation.

With the testimony in such shape before the trial judge, he, at the conclusion of all the evidence, directed a verdict in favor of the defendant thereby ruling there was no question to be submitted to the consideration of the jury. An appeal was taken bringing up the case for review before the highest court of the State, and the final determination of the litigation was an affirmation of the judgment in favor of the doctor.

The Appellate Court carefully considered the testimony on behalf of the plaintiff, and appraised it as amounting to no more than the opinion that if another course had been followed possibly the foot might have been saved, and that in such cases as the one before the Court, the duty of the surgeon was to first seek consultation and then to use his best judgment and go ahead. According to the Court the defendant had measured up to the standard set by plaintiff's experts, having consulted with the four house surgeons, and then in his best judgment, having undertaken the operation as an emergency measure to save the patient's life.

The Court ruled that there was no question under the facts of the case that a true emergency existed, and summarized the law as applied to the situation as follows:

It would be unreasonable to hold a properly qualified physician or surgeon responsible for an honest error of judgment, where, as in the instant case, he is called upon to act in an emergency and must choose between two courses of action either one of which involves the possibility of the gravest hazard to the patient.

It is, we think, very clear upon this record, that the question presented to the defendant, at the moment he was called upon to act, was one of judgment only. Instant action of some sort was imperative. In reaching a conclusion as to the proper course to be pursued, the attending surgeon must necessarily be influenced by many considerations: The physical character of the wound, the fact that there was a compound dislocation of the bones of the foot, the entire absence of one of these bones, the stripping off of the flesh from the anterior part of the foot, leaving the tendons

bare and shiny, the fact that the foot had become wholly devitalized, the presence of hemorrhage, the danger from blood poisoning at the time, or from future infection, the character and quantity of foreign matter, dirt, cinders, and so on, in the wound.

To a consideration of these matters must be added a careful attention to the general condition of the patient, the degree and cause of the existing shock, the apparent ability or inability of the patient to resist shock, the condition of the temperature, pulse, and respiration, and the reaction or lack of it produced by the administration of stimulants.

Called upon to act under such circumstances and to determine which of two courses (one entailing certain mutilation and the other probably death to the patient) should be followed, it is apparent that the defendant is not bound by the ordinary rules of negligence, but is entitled to insist that, having used his best judgment, he is not liable.

The Court also said in its opinion:

The fact that surgeons are called upon daily, in our large cities, to operate instantly in emergency cases in order that life may be preserved, should be considered. Many small children are injured upon the streets in large cities. To hold that a surgeon must wait until perhaps he may be able to secure the consent of the parents before giving to the injured one the benefit of his skill and learning, to the end that life may be preserved, would, we believe, result in the loss of many lives which might otherwise be saved.

It is not to be presumed that competent surgeons will wantonly operate, nor that they will fail to obtain the consent of parents to operations where such consent may be reasonably obtained in view of the exigency. Their work, however, is highly humane and very largely charitable in character, and no rule should be announced which would tend in the slightest degree to deprive sufferers of the benefit of their services.

BLOOD TESTS IN PATERNITY CASES

When an unwed mother in Sweden accuses a man of being the father of her child, he can demand a blood test to show his innocence. In this country the courts have been reluctant to admit such evidence, but both the medical and the legal professions view the possibility of it with interest.

It is said by a writer in the *Ohio Bar* that in a high percentage of illegitimacy cases an innocent man is wrongly accused, and a blood test can clear him, it would serve the ends of justice. As many know, human blood has been classified in four groups, depending upon the presence or absence of certain chemical substances, which accounts for the four possible combinations, gives the blood certain characteristics which remain constant, and which are transmitted from parent to off-spring in accordance with the well-established Mendelian law of heredity.

On the basis of this knowledge, blood tests of the mother, the child, and the alleged father reveal in a certain percentage of cases that the man could not possibly be the father of the particular child. The only method by which one of these substances can be present in the blood of the off-spring is by inheritance from one of the parents. Consequently if the blood of the mother does not contain a substance found in that of the child, one whose blood did not contain that particular substance could not be the father of that particular child.

In cases other than those in which the test establishes the fact of non-paternity, the result of the test is not conclusive—no more defi-

nite conclusion being possible than that the man might be the father of the child. The number of cases by which it is possible to establish non-paternity by this method has been estimated to be about one-third of the total number of cases tested.

Dr. L. H. Snyder, Professor of Medical Genetics of the Ohio State University College of Medicine, is developing other tests which it is anticipated will enable the fact of non-paternity to be established in a very high percentage of cases. Three Ohio courts have decided favorably on requests for blood tests in paternity suits, while two courts, one in South Dakota and one in New York State, have ruled adversely. In this state, as related in the *Ohio Bar*, the New York Supreme Court in the case of *Beuschel vs. Manowitz* (151 Misc., 899, 271 N.Y.S., 277 [1934]) held that an order at the request of defendant subjecting plaintiff and her child to blood group tests should be granted; but this decision was reversed by the Appellate Division (272 N.Y.S., 165 [1934]).

A manufacturer's bulletin remarks that "it is ill-advised economy to prescribe or dispense on a price basis even though cheaper labels may read the same as higher priced ones. Cheap drugs are expensive drugs in the long run. Added pennies may be worth as many dollars in satisfaction. They may be represented in the selection of materials, in scientific supervision, skilled production methods, standardization, clinical background, or any one or more of a dozen means of adding value to a product."

Books

BOOKS RECEIVED

[Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Physical Defects—The Pathway to Correction A study of physical defects among school children in New York City.—By the Research Division of the American Child Health Association. Octavo of 171 pages. New York: American Child Health Association, 1934.

Human Personality and the Environment—By Charles Mackie Campbell. Octavo of 252 pages, illustrated. New York, Macmillan Company, 1934.

The Principles of Therapeutics—By Francis Richard Fraser, M.D. The Abraham Flexner Lectures, Series Number Three. 12mo of 135 pages. Baltimore, Williams & Wilkins, 1934. Cloth, \$2.00.

To Remind, A Biological Essay—By Sir William Bates Hardy, M.D. The Abraham Flexner Lectures, Series Number Two. 12mo of 45 pages. Baltimore, Williams & Wilkins, 1934. Cloth, \$1.00.

Medicine & Mysticism—By R. O. Moon, M.D. 12mo of 57 pages. New York, Longmans, Green & Company, 1934. Cloth, \$1.00.

Minor Surgery in General Practice—By W. Travis Gibb, M.D. Octavo of 429 pages, illustrated. New York, Paul B. Hoeber, 1934. Cloth, \$5.00.

Definite Diagnosis in General Practice—By W. L. Kitchens, M.D. Octavo of 1000 pages. Philadelphia, Saunders, 1934. Cloth, \$10.00.

The Biology of the Individual. An Investigation of the Most Recent Advances—Vol. XIV of a series of Research Publications of the Association for Research in Nervous and Mental Disease. Octavo of 323 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1934. Cloth, \$6.00.

Aids to Obstetrics—By Leslie Williams, M.D. Tenth Edition. 16mo of 219 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.25.

Aids to Operative Surgery—By Cecil P. G. Wakeley, F.R.C.S. Second Edition. 16mo of 225 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.25.

Aids to Osteology—By Philip Turner, F.R.C.S. Third Edition. 16mo of 222 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.50.

A Decade of Progress in Eugenics—Scientific Papers of the Third International Congress of Eugenics, held at American Museum of Natural History, New York, August 21-23, 1932. 8vo of 531 pages. Baltimore, The Williams & Wilkins Company, 1934. Cloth, \$6.00.

Benign, Encapsulated Tumors in the Lateral Ventricles of the Brain. Diagnosis and Treatment—By Walter E. Dandy, M.D. Octavo of 189 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1934. Cloth, \$4.50.

Diseases of Women—By Ten Teachers. Edited by Cornyns Berkeley, et al. Fifth Edition. 8vo, 568 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$6.00.

Seeing and Human Welfare—By Matthew Luckiesh, D.Sc. Baltimore, Williams & Wilkins Company, 1934. Duodecimo of 193 pages, illustrated. Cloth, \$2.50.

International Clinics A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 4, 44th Series, 1934.—Edited by Louis Hamman, M.D. Octavo of 325 pages, illustrated. Philadelphia, J. B. Lippincott Company, 1934.

Healthy Babies Are Happy Babies A Complete Handbook for Modern Mothers.—By Josephine H. Kenyon, M.D. Duodecimo of 320 pages. Boston, Little Brown & Company, 1934. Cloth, \$1.50.

Handedness—Right and Left—By Ira S. Wile, M.D. Octavo of 439 pages. Boston, Lothrop, Lee & Shepard Company, 1934. Cloth, \$2.75.

The Heart Visible A Clinical Study in Cardiovascular Roentgenology in Health & Disease.—By J. Polevski, M.D. Octavo of 207 pages, illustrated. Philadelphia, F. A. Davis Company, 1934. Cloth, \$5.00.

Manual of Clinical Laboratory Methods—By Pauline S. Bennett, Ph.D. Octavo of 156 pages, illustrated. Philadelphia, F. A. Davis Company, 1934. Cloth, \$2.00.

The Autoimmune Diseases or the Rheumatic Syndrome—By T. M. Rivers, M.D. Duodecimo of 299 pages. Philadelphia, Lippincott & Company [c 1934]. Cloth, \$3.00.

Food for the Diabetic—By Mary Pascoe Huddleson. Third Revised Edition. Duodecimo of 110 pages, illustrated. Cloth, \$1.50.

Treatment by Diet—By Clifford J. Barborka, M.D. Octavo of 615 pages, illustrated. Philadelphia, J. B. Lippincott Company [c 1934]. Cloth, \$3.00.

Periodic Fertility and Sterility in Woman A Natural Method of Birth Control.—By Prof. Hermann Knaus. Octavo of 162 pages, illustrated. Vienna, Wilhelm Maudrich, 1931. Cloth, \$6.50 post free.

Brucella Infections in Animals and Man Methods of Laboratory Diagnosis.—By I. Forest Huddleson. Octavo of 107 pages, illustrated. New York, The Commonwealth Fund, 1934.

An Atlas of the Commoner Skin Diseases—By Henry C. G. Semon. Baltimore, William Wood & Company, 1934. Quarto of 221 pages, illustrated. Cloth, \$12.00.

BOOKS REVIEWED

International Clinics—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Vol. 2, 44th Series, 1934. Louis Hamman, M.D., Editor. Octavo of 317 pages, illustrated. Philadelphia, J. B. Lippincott Company [c 1934]. Cloth, \$3.00.

The first article by Longcope gives an account of two patients who suffered from excessive edema associated with abnormally low plasma proteins due to protein deprivation, in these patients associated with disease of the digestive tract, etc. A review of the pathology follows this.

... .. surgery than on medicine

... .. "Operative Shock,"

... .. "Exophthalmic Goitre,"

... .. in the Treatment of Pulmonary Tuberculosis, and two on "Peptic Ulcer"

Recent progress in obstetrics and pediatrics includes a review of the toxemias of later pregnancy and of immunization against diphtheria and scarlet fever.

W. E. McCOLLUM

Organic and Bio-Chemistry By R. H. A. Plimmer, D.Sc. Fifth Edition. Octavo of 624 pages, illustrated. New York, Longmans, Green & Company, 1933. Cloth, \$7.50.

Recently a considerable amount of organic chemistry,

formerly omitted from texts of this nature, has suddenly become of vital importance in physiological and biological inquiry. It is a Herculean task for the average student in medicine, biology, or chemistry to keep abreast of the times and informed of current advances in his chosen field by perusal of the countless number of texts and articles. It is not likely that he would be qualified to cull the wheat from the chaff—to differentiate between purely experimental interest and fundamental knowledge. This substantially is what Professor Plimmer has done in this book.

The book is consequently an extension and amplification of a previous edition. The subject matter has been thoroughly revised and brought up to date, the new mass of material making an appreciable change in the subjects both theoretical and practical. Viewed from the practical, only the vital reactions and evidences of organic substances and processes are stressed, controversial aspects being omitted. From the theoretical standpoint, the subject matter is always in accordance with the method or procedure being discussed, the author correlating the material as much as possible with medical investigation.

Space will not permit a full discussion of all the interesting aspects of this book, but the student will find the text more than adequate for his needs.

SAMUEL G. DUBOFF

Medical State Board Examinations.—Topical Summaries and Answers.—By Harold Rypins, M.D. Octavo of 448 pages. Philadelphia, J. B. Lippincott Company, [c. 1933] Cloth, \$4.50.

The medical student in taking his final examinations after four years of constant application to his studies is usually under severe mental strain and not always in the best of physical condition. The State Board Examinations mark the final barrier which he must overcome before he is admitted to the practice of medicine. In presenting the book on Medical State Board Examinations, Dr. Rypins shows that he has taken these facts into consideration, since it is apparent that he understands the psychology of the medical student.

The personal foreword to the candidate for examination contains splendid advice which if followed by the candidate will help him in overcoming that panic which as stated by Dr. Rypins "is not an uncommon cause of failure."

The book itself contains ten chapters covering all phases of medicine including anatomy, physiology, chemistry, bacteriology, pathology, hygiene and preventive medicine, obstetrics, gynecology, medicine, and surgery. The subject matter in each section is very briefly and intelligently discussed. These discussions are followed by questions taken from the various State Board Examinations. A perusal of these questions shows that if the student has been diligent in his studies he should be well qualified to pass the examination.

The detailed index will be found very useful for easy reference.

The book is recommended to all students preparing for State Board or other licensing examinations.

REUBEN FINKELSTEIN

America Self-Contained.—By Samuel Crowther. Octavo of 340 pages. Garden City, N. Y., Doubleday, Doran & Company, 1933.

Here is a treatise on those economic and political problems which have to do with the international dependence of the United States of America—or, rather, had to do with them. For, as the author shows America is now, and can continue to be, self contained because of the scientific development at home of those products which once we were compelled to obtain elsewhere.

Credit for the evolution of this self-sufficiency is given to those scientists who met the demands made by the exigencies of the World War in the manufacture of drugs and chemicals. This work was encouraged and directed by the activities of the Chemical Foundation, created by President Woodrow Wilson. The author shows how the chemical industry in this country was all but throttled by unfair competition on the part of its German competitors.

Many other problems in addition to the development of the chemical industries are discussed; such as the political and economic significance of the international debts, free trade and the tariffs, and foreign entanglements. To those interested in the story of the economic development of the United States, *America Self-Contained* offers enlightening and instructive reading.

JOSEPH RAPHAEL

Surgery of a General Practice.—By Arthur E. Hertzler, M.D., and Victor E. Chesky, M.D. Octavo of 602 pages, illustrated. St. Louis, C. V. Mosby Company, 1934. Cloth, \$10.00.

This volume is an enlarged edition based upon the last edition of *Minor Surgery* which appeared in 1930. The authors have endeavored to present the general practitioner with as complete a number of minor surgical procedures as can be readily handled in the doctor's office.

The pathology and the various steps of the surgical treatment are in most instances clearly illustrated. The number of those published in the 1930 edition of illustrations, partly and include many new fully lesions.

The subject covered and the book should prove of general practitioner who has had some and is qualified to apply that and

R. F. HARLOW

A Textbook
M.D. Second
rated. Philad.
Cloth, \$6.00.

By Arthur H.
of 493 pages
ers Company

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free from acad

It is clear,
truly

of the author's well-known conservative viewpoint. As one would expect the chapters on gonorrheal disease of the female genitalia and the cellulitis group of pelvic infections are particularly good. It is interesting to note that the author recommends for prolapse an advancement operation which he describes as similar to the Manchester or Fothergill operation. In the management of ruptured ectopic pregnancy, Curtis delays operation when the patient is in profound shock, and does not intervene in those cases where symptoms have subsided, until reaction has taken place or there is failure of improvement. This is perhaps not generally accepted teaching, but proper practice in the opinion of Brooklyn gynecologists. A fine text-book for students, and one that many specialists will find stimulating.

CHARLES A. GORDON

Clinical Toxicology.—Modern Methods in the Diagnosis and Treatment of Poisoning. By Erich Leschke. Translated by C. P. Stewart, Ph.D., and O. Dorrer, Ph.D. 12mo. of 346 pages. Baltimore, William Wood & Company, 1934. Cloth, \$5.00. (The Gloucester Series.)

To confine the subject of toxicology in a small volume that will be of assistance to the physician is no easy task. In the English translation of Prof. Erich Leschke's *Clinical Toxicology*, the reader will find a small book that meets this requirement. The author states in the preface that, "it does not claim to compete with the existing excellent toxicological and pharmacological works, but should rather stimulate their closer study."

The subject is presented from the clinician's point of view, containing case histories, treatment, analytical methods, some illustrations, and a well-arranged index. The translators have added a chapter by Dr. Koelsch, who is connected with the medical inspection of factories in Bavaria. While the subject is presented along the lines of German medical practice, it will be of aid to the physician interested in compensation service in the United States.

The book is well arranged with a short introduction. Part I comprises "Poisoning by Inorganic Substances," while Part II is devoted to "Poisoning by Organic Substances." There are three appendices covering "Industrial Poisoning," "Post-Mortem Detection of Poisoning," and a list of drugs under their trade names.

While the book may appear rather abridged in some subjects, it is just such a volume as the physician needs at hand to assist him in arriving at a correct diagnosis. The volume should prove of value to the physician engaged in industrial medicine, as well as to the general practitioner, and is recommended as an addition to the physician's reference library.

C. T. GRAHAM-ROGERS

Nephritis and Allied Diseases.—Their Pathogeny and Treatment. By Robert Platt, M.D. Octavo of 166 pages. New York, Oxford University Press, 1934.

In the preface the purpose of this work is clearly stated "to present what the author has found of most practical value in our knowledge of Bright's disease at the present day." A review of the book shows that he has accomplished his purpose. To the American student it seems regrettable that more emphasis has not been laid on the work of Addis and Oliver, particularly their method of counts of the concentrated urinary sediment. Dr. Platt adheres to the simpler classification of nephritis and rightly so and shows by his diagram that they all lead to renal failure.

In treatment he belongs to the group who believe that high-protein diets favor the development of nephritis. He prescribes low-protein diets in acute, subacute, and chronic nephritis, not because of the proteinuria but in order to minimize the work of the kidney in excreting nitrogenous products. His diets contain absolutely no protein except that derived from milk, fruit, and vegetables.

In the diagnosis of uremia the author mentions the blood indican as a simple and valuable test as it is always found to be high in true uremia. The reviewer is not familiar with the use of this test.

When discussing drug therapy he emphasizes the point that no drug has a specific effect upon the kidney. There is value in repeating this fact. He warns against the use of salyrgan in the edema of nephrosis and says that it can be used only after all other methods have failed and extensive edema has remained stationary for a long time. Urea and ammonium are good diuretics.

The reader will find this work an excellent orthodoxy of present day knowledge of nephritis.

EDWIN P. MAYNARD, JR.

THE ACTION OF THE AUTONOMIC NERVOUS SYSTEM AS
AN EXPLANATION FOR THE THERAPEUTIC VALUE
OF THE CARBONIC ACID BATHS IN
DEGENERATIVE CARDIAC DISEASE

ALEXANDER LAMBERT, M.D.

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New York City*

For centuries the use of baths has been a wide spread method of medical therapeutics. The development has been largely empirical and since Beneke, Groedel, and Schott a generation ago began to use the waters at Nauheim for specific cardiac therapeutics the empirical knowledge has increased greatly in wisdom and skill. But no accurate explanation could be given for the therapeutic effect of the CO₂ mineral baths over the plain water baths of the same temperature. Even the increased knowledge of heart disease and the increased skill in the clinical examinations and the results from the tests of gas metabolism have brought no corresponding explanation for the therapeutic effect of the carbonic acid bath.

What becomes of the CO₂ gas after absorption through the skin and what are the essential effects in the body beyond its cutaneous action were the mooted questions which remained unanswered. Although the undeniable benefit derived by the patient in certain degenerative diseases of the heart was increasingly evident, the cardiac mechanism through which these CO₂ baths produced the beneficial result was not evident and remained unexplained.

After many years of investigating by every available method of approach those most experienced in the application of these CO₂ baths have become convinced that it is through the mechanism of the autonomic nervous system that the resulting beneficial changes in the body take place. Recently Loewi¹² and Cannon^{2, 3} have each brought forward conclusive evidence that the action

of the autonomic nervous system is produced by the humoral secretion of chemical substances which mimic the action of local nervous stimulation, and yet may be transported by the blood stream and produce their characteristic effects in distant areas of the body. The acceptance of these new facts requires such a change of view point that it seems necessary before discussing the action of the CO₂ baths, to describe rather fully some of the physiology of the autonomic nervous system.

PHYSIOLOGY OF THE AUTONOMIC SYSTEM

Until the delicate balance of our circulation has broken down, few persons realize how every movement, every strong emotion, every change in external temperature, requires some accommodation of the nervous balance of the autonomic nervous system to produce the required energy, and to bring the nervous mechanism back into its usual normal equilibrium. Cannon¹ calls it the production of "homeostasis of the body," which implies the likeness to stability produced by the interplay between the opposing functions of the sympathetic systems. In the reactions between the two portions of the autonomic system, any discharge of sympathetic energy is sent throughout its entire system, while a discharge from the parasympathetic or vagal system is sent to the separate nervous ganglions situated in, or near, the organ requiring individual action.

Thus the pupil may be contracted by the vagus, without slowing the heart, or the heart slowed without affecting the increased

motor action of the stomach. On the other hand, an emotion, like rage, causes a general sympathetic discharge, producing certain set actions throughout the body, simultaneously affecting the circulatory, cardiac, pulmonary, and splanchnic areas.

In ordinary, quiet existence the balance between the parasympathetic and sympathetic portions of the autonomic nervous system is kept in equilibrium by the predominant function of the sympathetic system in some portions, and in other portions by predominant function of the parasympathetic. The equilibrium of the autonomic system⁴ is not one of quiescence, it is one of active stimulating tone; in general the sympathetic accelerates the heart, contracts the arterial and venous vessels, stimulates the adrenalin secretion, increases the respiratory activity, dilates the pupil, increases thyroid secretion, diminishes the gastro-intestinal peristalsis, activates the discharge of glycogen from the liver, contracts the spleen to pour out increased red blood cells for increased supply of oxygen, and increases the general metabolism. With opposing function the parasympathetic inhibits the heart, dilates the blood vessels, inhibits the adrenalin secretion, diminishes respiratory activity, contracts the pupil, inhibits the thyroid secretion, increases the gastro-intestinal peristalsis, and checks the discharge of glycogen from the liver and diminishes the general metabolism.

The main element which interests us here in the autonomic balance is that the heart lies normally under the dominating control of the parasympathetic. The blood vessels, on the other hand, normally rest under the active tone of contraction by the sympathetic system. There is therefore the same antagonistic control between the two parts of the autonomic system in its balance within the heart and between the heart and vascular circulation, that there is in the balance of the varying opening and closing of the sphincters in the intestinal canal. The delicate balance is preserved because of reflex action of opposing function.

In healthy youth, the heart can stand the strain of any exertion, and it can also retain its vigor through long years of life. But as years go on the heart becomes degenerated by many attacks of sickness, or by years of inertia, and dietary excesses, it becomes out of condition, it then

on exertion is unable to supply sufficient oxygen to the tissues, and will produce the shortness of breath, which halts its struggling owner. Or if from failure of sympathetic reflexes there is lack of blood sugar to supply the required energy, there will arise an early excessive exhaustion, which forces cessation of action, however much the indomitable will of the personality may struggle against it. Emotions of fear, or worry, which is fear, and sorrow, pain and anger play a greater part in the wear and tear of life than do work or exertion, and cause intense reactions in the autonomic nervous system.

It is unnecessary to go into explanatory details, but the three seemingly disconnected happenings in the body, of exertion, emotion, or sudden entrance into a cold environment demand increased cardiac output, and often bring on attacks of angina pectoris. The degenerated heart cannot perform the necessary redistribution of the blood over the body without supplying this immediate demand for the increased output per beat, which in its degenerated condition is an excessive demand. Pain results and acts as a warning signal that excessive demands have been made on the heart, which require relief or instant cessation. Pain is a pathologic not a physiologic reaction.

It is immaterial for our present purpose to discuss the reasons of the pain, since the medical theories of the causation of cardiac pain are still under discussion.

Variations in blood pressure have long been known to be a large factor in the balance of the circulatory equilibrium, but the controlling mechanism of the blood pressure has not until recently been worked out.

The work of Hering⁴ and Heymans, Bouckaert, and Regniers⁵ on the two aortic depressor and the two carotid sinus nerves, has revolutionized the conception of the mechanism which controls the blood pressure, and shows that these four nerves are a dominating factor in the balance between the heart and the peripheral circulation. They are justly called by Hering⁴ the vagal reflex restrainers of the blood pressure.

For many years it has been recognized that the aortic depressor nerve, distributed over the aorta, and the bases of the innominate and left subclavian arteries, was an afferent nerve, having its ganglionic

cells in the ganglion nodosum of the vagus. There is distinct evidence that these ganglionic elements of the aortic depressor nerves are connected with the centers in the medulla by fibers, which follow the lower bundle of the glossopharyngeal nerves. This is particularly interesting as the carotid sinus nerves, as we shall see, are also branches of the glossopharyngeal, acting as part of the parasympathetic system.

The work of Hering⁴ and especially the anatomical work of de Castro⁵ emphasize that where the common carotid artery divides into the internal and external carotids, there is an enlargement of the internal carotid, which is not aneurysmal, nor accidental, but is a normal peculiarity for men, and most mammals.

In cattle, however, this sinus occurs on the occipital artery, because in the bovine animals the common carotid divides into three vessels an occipital artery, a glossofacial and the external carotid, there being no internal carotid artery.

The carotid plexus of nerves is formed by branches from the ganglion nodosum of the vagus, and a branch from the superior sympathetic ganglion, but the main nerve supply arises from the glossopharyngeal as a single nerve, just as this last nerve leaves the jugular foramen, or comes by several nerves from the pharyngeal branches of the glossopharyngeal. All these nerves spread out abundantly in the adventitia of the internal carotid as this vessel enlarges to form the carotid sinus and they also supply the important carotid glomerulus resting in the bifurcation between the internal and external carotid arteries. This small, round, so-called carotid gland or glomerulus, occurring normally at this point, is not an endocrine gland, it has no secretory action in its cellular lining, but is richly supplied with blood vessels from the carotid artery and its cellular structure is abundantly furnished with nerve fibers, whose endings are not of a secretory type, but are those belonging to an efferent nerve. De Castro's⁵ conclusions are that this carotid glomerulus is a sensory organ, probably especially designed to respond to certain qualitative modifications in the blood. In fact, Heymans and his co-workers produce strong evidence that these conclusions are

justified,⁶ since they have shown that the nerves sensitive to variations of pressure are situated in the walls of the carotid sinus while the nerves sensitive to chemical excitants are confined to the glomerulus.

Variations in the CO₂ tension,⁷ and doses of nicotine or lobulin so small as to be inert when injected through a denervated carotid sinus, effect intensely the respiratory and circulatory centers of the medulla through nervous reflexes originating in the innervated carotid glomerulus. Although the respiratory and other centers are highly sensitive to changes of the blood pressure, through reflexes coming from the nerves of the carotid sinus, these centers are relatively insensitive to variations of pressure in the large vessels going directly to the medulla. The respiratory center is also more sensitive to reflexes due to changes of blood pressure in the carotid sinus and aortic zones than it is to variations in the chemical composition of the blood.

Heymans⁸ and his co-workers conclude that the CO₂ seems to be the primordial stimulant to the sympathetic system, raising the arterial blood pressure. The reaction of the parasympathetic results from this endovascular blood pressure causing the reflexes from its carotid sinus and aortic depressor nerves to reduce this rising pressure, thus in turn producing and preserving the normal autonomic nervous balance.

Whether or not the balance between the sympathetic and parasympathetic portions of the autonomic nervous system is so completely dependent on the carbonic acid on the one hand, and on the variations of pressure tone on the other, remains to be decided in the future, other chemical substances, at present unrecognized, may well enter into the rise and fall of the blood pressure.

Loewi¹² and Cannon¹³ have recently brought forward evidence which shows that the autonomic nerve impulses become effective through chemical substances secreted by the nerve endings themselves. The nerve endings of the autonomic system to smooth muscles and to the myocardium are distributed in a network around the nucleus of the muscle cell. But only one nerve supplies a cell. There seems to be no accurate histological evidence that a single cell is supplied by both a sympathetic and parasympathetic nerve,

but there is strong histological evidence to show that not more than one cell in a hundred is connected directly with the autonomic nervous system. The humoral chemical substances distributed over these cells supply the actions which mimic the reaction from the sympathetic or parasympathetic nervous stimulation.

Loewi¹² in 1921 showed that the vagus, when stimulated directly in an isolated frog's heart, produced a substance which in turn gave the characteristic vagal cardiac inhibition when transferred to a second isolated heart deprived of its vagus. This was designated "vagus substance" which later Loewi showed to be identical with acetylcholin and is now generally so accepted. Atropin was shown to inhibit vagal action through prevention of the action of acetylcholin in the responsive cell mechanism, but atropin does not paralyze the vagal nerve endings. Further, the increase of vagus stimulation by eserine (Physostigmin) was not due to any effect on the vagus itself but due to the prevention of destruction of the acetylcholin by a heart muscle esterase. Acetylcholin is a labile substance, dialyzable, but quickly destroyed in blood or tissue esterase and in an alkaline medium, but preserved by all free acids. The esterase action is diminished by increase of CO₂ tension, that is by increased hydrogen concentration. Not only has it been demonstrated that the cardiac vagus secretes this substance, but it has also been proven for the lingual, chorda tympani, and oculomotor nerves and for the parasympathetic nerves of the stomach, and also for the peripheral vasodilator nerves. Cannon suggests the name of parasympathin for Loewi's vagus substance.

Cannon^{2, 3} and his co-workers have also brought forward conclusive evidence that a sympathetic substance is released from stimulated cells under physiological conditions, and they have proved that "the heart, the salivary glands and nictitating membrane, deprived of sympathetic innervation, exhibit responses characteristic of sympathetic influence when smooth muscle of remote regions is stimulated by way of sympathetic nerves and when the only communication is through the bloodstream. The evidence seems quite clear that not only are the sympathetic mimetic and parasympatheticomimetic substances produced when smooth or cardiac muscle is stimu-

lated by corresponding nerves, but that these substances diffuse out from the affected organs into the circulating blood and under appropriate conditions can have typical mimetic effects on distant organs." This substance thus secreted is called sympathin and resembles adrenin. Both these substances cause, when carried by the bloodstream, acceleration of the heart, rise of blood pressure, contracture of nictitating membrane, and so on. But after the injection of ergotoxine material differences of action are shown by adrenin and sympathin, they are therefore different. There are two kinds of sympathin; sympathin E, given off from smooth muscle which is excited to contract by sympathetic impulses and sympathin I from smooth muscles excited to relax. Both forms of sympathin, escaping from their cells of origin, may be carried by the bloodstream and are capable of causing contraction or relaxation in distant smooth muscle organs which respond to sympathetic influence.

After the injection of ergotoxine, however, there is just as much sympathin E formed as before, but the ergotoxine combines with the sympathin E and prevents its action on the responsive mechanism of the contracting muscle. Ergotoxine, like atropin, does not act on the nerve fibers.

It has been known for many years that pressure on the carotid artery at the level of the upper edge of the larynx, below the angle of the jaw, produced a temporary slowing of the heart in many people, while in others there was no effect.

In recent years, since blood pressure could be measured, it has also been recognized that with this cardiac inhibition, there was also a fall of pressure, which often occurred, even when cardiac reflexes did not take place, and persisted longer than the temporary inhibitory effect on the heart. This has usually been known as Tschermak's test, and was believed to be due to pressure on the vagus nerve. Hering, however, has shown definitely that it is not a response of the vagus, but is due to pressure on the carotid sinus. Pressure on the vagus does not produce either the cardiac, or blood pressure reflexes, nor does pressure on any part of the carotid artery, except on the area of the sinus, produce change of blood pressure or cardiac inhibition.

In persons with healthy, normal circulations there is, as a rule, a distinct, but slight

response to this test. Among those, however, suffering from arteriosclerosis, or with hypertension, the response is much more frequent, and often very marked, and in a certain number, the response is even severe, producing cardiac arrest, convulsive seizures, and unconsciousness for a short period.

It is evident therefore that hearts degenerated by arteriosclerosis are more than normally sensitive to nervous reflexes of the autonomic nervous system, and they may respond with an intense reaction to even slight stimulation. As the myocardium degenerates the heart is therefore increasingly responsive to its nervous mechanism. This clinical evidence is of value in the explanation of the therapeutic effects of baths in cardiac therapeutics.

PHYSIOLOGY OF THE CO₂ BATHS

The weight of evidence at Nauheim⁵ and Saratoga Springs seems to indicate that for the average cardiac patient, the most beneficial bath is that of the half- or three quarter bath, at a temperature of about 34°C. (93.2°F), in which the thermic effect of the bath is at a minimum, and in which the exposure of the body to the absorption of the gas is also moderately extensive, the bath being of short duration of ten minutes, or less, continued for a certain number of days, usually about eighteen or twenty baths. This seems to give the best physiologic effect of the carbonic acid in the body, and the most invigorating action on the cardiac mechanism. For the present purpose it is unnecessary to discuss the variation in the baths themselves, or the variability of the indications for their use.

The difference between the carbonic acid baths and other mineral baths is essentially due to the content of carbonic acid dissolved in the water. In these baths carbonic acid clings to the skin, in the artificial CO₂ bath in large bubbles, and in the natural baths in small bubbles, the gas in these bubbles is not absorbed by the skin, it is the areas of skin between bubbles which are the intake points of the CO₂ into and through the skin, it is the CO₂ dissolved in the water which is the effective agent. For this reason, the waters naturally containing the dissolved carbonic acid apparently are more efficient, than those in which the carbonic acid has been artificially produced. There is a sense of warmth pro-

duced in the skin by the action of the CO₂. This and the reddening of the skin occurs whether or not the bubbles are left on the skin, or are continuously gently rubbed off every few minutes.

The carbonic acid causes a marked reddening of the skin as far up on the body as the water extends on the submerged skin, the redness stopping sharply on the line where the skin ceased to be wet by the carbonic acid water. It is therefore not a reflex action, but a direct action of the CO₂.⁶ Krogh⁶ has shown that increased CO₂ tension in the tissues greatly dilates the capillaries and arteries. If the arm be held against the axilla under the water during the bath, the area of the contact will remain glistening white, sharply marked off from the reddened skin around it.

Although the air above the CO₂ bath contains a varying proportion of carbonic acid gas, usually below 5 per cent, this CO₂ varies according to the temperature of the bath, the amount of CO₂ in the water, and the movements of the top layer of water and the air above it. This CO₂ can readily be, and often is, absorbed by the lungs in respiration during the bath. This is especially true of the full bath. In the three quarter, and the half bath, the face of the patient is too high above the water to have the gas mix with the air to any noticeable effect. There is evidence that the CO₂ thus absorbed does not seem to produce any increased cardiac effect. Groedel,⁷ moreover states that the respiration is noticeably deepened and respiratory volume increased almost immediately in the half and three quarter baths as well as in the full baths, even when the patient is protected against breathing any CO₂ gas. This was also true in the careful experiments of Groedel and Wachter⁸ on the gas metabolism of these CO₂ baths.

These experiments clearly show that with the CO₂ Sprudell bath water at 33°C. (91.4°F) of ten minutes' duration, the oxygen consumption rose about 8 per cent, while the CO₂ output increased to between 24 per cent and 34 per cent. The respiratory volume followed the carbonic acid curve, and although the depth of the respiration and respiratory volume greatly increased, the respiratory frequency did not increase or varied but little. After such a CO₂ bath, the oxygen demand returns to normal in about eighty minutes, the car-

bonic acid excretion, however, after 100 to 200 minutes may not yet be fallen to the original figure present at the beginning of the bath.

In striking contrast to these results is the gas metabolism in the plain water baths of indifferent temperature between 34°C. to 36°C. The oxygen consumption rose to between 5 to 8 per cent. The carbonic acid production rose in half of the cases to between 1 to 5 per cent; in the other half it was negative. The respiratory quotient in consequence always sank below the original value. The continuation of these baths produced, in general, the same results.

Of course, the mooted questions in these CO₂ baths was the origin and effect in the body of the CO₂. Hediger¹⁸ has finally proved the actual absorption of the CO₂ by the skin, and that it depends on the laws of diffusion through membranes and on the concentration of the CO₂ in the penetrating fluid. In the natural baths at St. Moritz, or Nauheim, this absorption rate was calculated to amount to about 200 c.c. a minute. Harpuder,⁹ in his extensive review on these baths, concludes that the CO₂ diffusion through the skin is evidently so well compensated by the respiration that measurable changes of the alkali reserve or of the pH do not occur.

This conclusion is based chiefly on the work of Liljestrand and Magnus,¹⁷ who found that the oxygen did not increase but the increase of CO₂ was so entirely controlled by the hyper-ventilation of the lungs that there was a fall in both the venous and arterial CO₂ tension, as shown by the alveolar CO₂. Of course, the alveolar CO₂ tension is equivalent to the CO₂ tension of the arterial blood. The respiratory quotient rose, in some experiments even to 1. There was an increase of respiratory volume, but the respiratory frequency did not change in one subject, while in the other it increased only on the average of four from 8.8 to 11 per minute.

These investigators deny any effect in the baths to the CO₂ or its absorption by the skin. They accept the skin irritation from the CO₂ to explain the warmth felt in the cool CO₂ baths at 27.5° to 33°C. (81.5° to 90.4°F.), and ascribe the increase of respiratory volume to the same skin irritation. There was an increase in the minute volume in the cardiac output

4.8 before the bath, to 5.9 liters per minute in the bath and an average increase of the output per beat of the heart from 98.5 c.c. to 128 c.c.

Too much stress should not be laid on these experiments, as the method employed was one using nitrous oxide as the inert gas for rebreathing, instead of the more accurate acetylene gas. They were performed in 1922 and the opinions expressed could not be influenced by Hediger's¹⁸ work in 1928 on CO₂ absorption. It is most desirable that these experiments should be repeated, using the newer acetylene method.

Bornstein, Budelmann, and Ronnell¹⁹ recently, in estimating the minute volume of the heart under the effect of various baths, found that the warm plain water baths at 38° to 39°C. (100.4° to 102.2°F.) increased the cardiac output per minute between two and three times. The technic used was Grollman's,¹⁰ but using nitrous oxide instead of acetylene. Winterstein and Fraenkel-Tessmann²⁰ repeated these experiments also at Bad Oeynhausen on the effects of these baths of 36 to 38°C. (96.8 to 100.4°F.) and employed the same technic, but used the acetylene gas. The results obtained showed that the influence of these warm baths on healthy persons, as tested by Grollman's acetylene method, produced either no change or a diminution of the cardiac minute volume.

Bornstein et al.,¹⁹ tried the effect of small amounts of CO₂ in inspired air, 0.25 per cent to 0.7 per cent on the minute volume of the heart. They report in some instances a slight effect but otherwise no effect. They, unfortunately, used the nitrous oxide gas in these experiments and express surprise on how little is the effect on cardiac output of small amounts of CO₂ in this inspired air. These results indicate that smaller amounts of carbonic acid, than can be demonstrated as changes in pH by most methods employed may well pass through the lungs into the arterial blood and stimulate reflexly the respiratory center through the carotid glomerulus since Heyman et al.,⁵ as already mentioned, have brought forward the evidence of such a possibility. But there does not seem to be evidence yet produced which has convincingly shown that there is an increase of CO₂ in the arterial blood, after the increased peripheral CO₂ absorbed in the bath has passed through the lungs.

DISTANT HUMORAL ACTION OF NERVOUS STIMULATION

There is, however, a possible explanation which may solve this puzzle. The vasodilator nerves in the fore and hind limbs of animals have their ganglion cells in the posterior spinal ganglia and they are distributed with the sensory nerves. Bayliss²⁸ from his experiments believed these were not efferent nerves but were identical with sensory nerves, and endeavored to explain their vasodilation action through their capacity for antidromic conduction. Kuntz¹³ states that the effects of antidromic conduction have been observed only on blood vessels and always involve vasodilation and expresses doubts of the antidromic theory. Both Kuntz¹³ and Alles¹⁴ quote Kuré and his co-workers as having brought forward histological evidence that every spinal segment has fine medullated fibers in dorsal roots which should be classified with the parasympathetic innervation of the craniosacral segments.

Alles¹⁴ in reviewing the physiological action of the choline derivatives also draws attention to the fact that

in antidromic vasodilation Lewis and Marvin had already definitely proven the presence of a humoral agent by showing that the amount of vasodilation resulting from local stimulation of an organ is dependent upon the amount of blood flowing through it and becomes marked when the flow is stopped. They ascribed this action to a histamine like substance. Dale considered this substance to be acetylcholin or a corresponding substance and Kibjakow has observed that the limb blood of the cat after stimulation of the related spinal root fibers produces a vasodilation of an isolated rabbit ear preparation which effect is related to acetylcholin and opposed to that of histamine.

Dale and Gaddum²¹ have also produced further evidence that the antidromic stimulation of the parasympathetic vasodilating nerves in the periphery produces acetylcholin in these areas. More recently Feldberg, Minz and Tsudzimura²² have carried still further the demonstration of the humoral action of the autonomic system by showing that impulses traveling down the splanchnic nerve fibers to the suprarenal medulla are chemically transmitted to the effector cells by the liberation of something indistinguishable from acetylcholin. This seems to be the first evidence that the preganglionic impulses transmitted by a sympathetic nerve, which the splanchnics

undoubtedly are, liberates acetylcholin. It hitherto has been considered as a transmitter only of parasympathetic effects. These workers also show that by protecting with eserine the acetylcholin liberated in the suprarenal medulla, the effects of the acetylcholin are shown on the arterial blood pressure and the secretion from the salivary glands of the same animal.

Minz²³ quotes Fuhner as having shown that the effect of eserine is specific in its inhibition of the action of the tissue esterase on the acetylcholin. Fuhner²³ also has shown that the acetylcholin is protected from the esterase by an increased hydrogen concentration, an increased CO₂ tension. Whether the acetylcholin-like substance secreted by the sympathetic splanchnics is similar to that secreted by the parasympathetic or only analogous, as in the case of the two sympathins, remains to be proven. In testing the acetylcholin and other cholin esters in these tissue solutions, the tests are made largely by the comparative action of these substances on the muscle of the leech (*Hirudo Medicinalis*), or on the abdominal rectus muscle of the frog and not, as a rule, differentiated chemically.

Kraitmair,²⁴ studying various cholin esters, has found one, carbaminoylecholin, an ammonium ester of cholin, which acts biologically in all respects similar to acetylcholin and is stable in solution easily soluble, and of extraordinary toxicity and active in doses which compare to those of hormones and vitamins. It does not require the protection of eserine, as it is stable in the tissue solutions and only slowly destroyed. Acetylcholin, however, is the only cholin ester yet recognized to be connected with the effects of nervous stimulation, but that does not indicate others may not be found.

It is but the logical development of the findings of Loewi¹⁷ and Cannon³ to conceive of the acetylcholin already demonstrated to exist in the periphery due to the action of the parasympathetic vasodilator nerves, being protected by the increased hydrogen concentration from the inflowing CO₂ as being carried in the return venous blood to the heart, even though the venous blood still is alkaline, stimulating thus an increased vagal action in the heart. This also helps to explain the increased action of the proprioceptive reflexes of the heart, i.e., those originating in the organ with

their actions confined to it, as the Bainbridge reflex,²⁹ increasing the blood flow through its chambers, and Anrep and Segall's¹¹ reflex increasing the blood flow through the coronary vessels. Both these reflexes are of vagal origin and would thus act without outside parasympathetic or sympathetic stimulus.

As Tschermak's test shows, degenerated hearts are more than normally sensitive to the influences of the autonomic nervous system and in degenerated hearts suffering the syndrome of angina, they are dominated by the influence of a disturbed equilibrium through increased action of the sympathetic system, which produces pathologic reactions, since normally the nervous balance in the heart is under the dominance of the vagal function more than that of the sympathetic. Using the CO₂ to protect the chemical conveyance to the heart of the products of the parasympathetic nerve stimulation of the periphery to bring about more normal equilibrium seems today to be the most logical solution of the problem.

ACTION ON THE CORONARY CIRCULATION OF THE CO₂ BATHS

Recent investigations have brought forward much interesting evidence showing the increase of cardiac output through the influence of the various baths. The special influence of the CO₂ baths at 32.5° to 34°C. (90.5° to 93.2°F.) is best understood by comparison with the effects of other baths. In plain water baths, slightly warm, 36° to 38°C. (94.8° to 100.4°F.) just above the indifferent temperature of 34° and 36° C., Winterstein and Fraenkel-Tessmann,²⁰ as already quoted, found that there was either no change or else a diminution of minute output. Budelmann²⁵ on the contrary, reports a moderate increase of the minute output in normal hearts in plain water baths of 37°C. to 38.5°C. (98.6°F. to 101.3°F.).

Voigt²⁷ shows that the results of a single arm bath or of two, three, or all four limbs, is the same as in the whole body bath. The increase of circulation, the rise of the minute volume, the pulse frequency, and rise of arterial pressure, are dependent on the extent of skin area used in the bath. In the single arm bath, the increase per beat was slight, but distinct, the pulse rate also increased slightly and the minute volume increase was also distinct, but in the other baths, using two or more limbs,

the increase per beat rarely occurred and the minute volume was obtained through the increased cardiac acceleration. The work of the left ventricle, however, was uniformly increased.

This is an interesting difference from the heart's mechanism in the CO₂ bath since the coronary flow is not augmented by increased cardiac rate.²⁰ It is increased by the rise of arterial blood pressure and by increased output per beat. In the hot plain water bath the increase of the cardiac output is through the stimulation of the sympathetic system, through the accelerators, by increasing the rate per minute while in the CO₂ bath with its diminished pulse frequency, the increased output is through the increase per beat, the ventricular output being stimulated through the normal vagal reflexes.

Voigt²⁷ emphasizes that with the gradual increase of the heat in these hot plain water baths, it is usually safe to use them in cardiac conditions, but they must be outlawed in angina pectoris. This is clinical testimony of the difference between the effect of the stimulation from these and the CO₂ baths. It is also claimed that the cutaneous stimulation of the heat in these baths is equivalent in its effects to the skin and tissue reaction from the CO₂. The evident sympathetic reaction on the cardiac rate mechanism from the heat reaction in the skin rules out this viewpoint as the vasodilator reaction at the periphery from the CO₂ is a parasympathetic reaction and is followed by an increased vagal reaction in the heart and not a sympathetic one.

Grollman¹⁰ shows, as the increased venous return blood from the periphery begins to pour into the heart, that it is an essential, but not the only factor in the increased cardiac output. The peripheral vascular dilation in the skin in the CO₂ baths requires increased distribution of blood from somewhere, probably the splanchnic area. It may be from the liver as there is a sluice-way mechanism in the liver, as shown by Bauer, Dale, et al.,²⁶ allowing a discharge of accumulated blood in its bodily redistribution. This is under sympathetic control and produced by the action of adrenalin. The stimulation of the sympathetic peripheral constricting vascular mechanism may well produce the reflex for a redistribution of blood.

Budelmann²⁵ brings forward some interesting results of his measurements of the

cardiac minute output in the slightly warm plain-water and CO_2 baths and shows that in the bath there is an immediate venous back flow to the right heart, in both normal and damaged hearts, producing a fall in vital capacity in the lungs and a general rise of venous pressure. This leads to an increase of blood in the right heart. If the compensating power of the left ventricle is functionally capable of accepting this sudden increase of load, it will with increased output per beat and minute volume soon accommodate itself to its increased output. In a normal heart, in about seven minutes, the vital capacity returns to its original level, but the venous pressure retains through the bath an increase of 2 to 3 cm. above its starting point. If the left ventricle fails to compensate, there is a continued fall of vital capacity and an increase of venous pressure and the failing left ventricle cannot increase its output and there is a sudden collapse of blood pressure and accelerated pulse.

In the plain warm baths and sometimes in the CO_2 baths, there is at first a slight increase of pulse rate indicating that the pressure of blood in the right auricle is causing the Bainbridge reflex²⁹ to act; i.e., the pressure causes a relaxation of vagal control, allowing the sympathetic accelerators to increase the rate that the blood may be hurried on through the chambers of the heart and thus assist the left ventricle to empty itself by an increased output per minute before it may be able to increase its output per beat. As soon as there is an increase in arterial blood pressure, there is an increase in coronary flow; this occurs in ratio to the mean blood pressure, i.e., half the sum of the systolic and diastolic pressures.³⁰ As soon as there is an increase per beat of the cardiac output, there comes into play the Anrep and Segall¹⁴ reflex from a relaxation of the vagal constrictors of the arterioles, and capillary vessels, increasing greatly the coronary circulation in the whole myocardium. Both the Bainbridge and the Anrep and Segall reflexes are vagal reflexes as they do not occur experimentally if the vagi are cut.¹¹

The CO_2 baths show earlier and characteristically a less frequent pulse rate than the plain water warm bath, due to the increased parasympathetic action on the mechanism of the heart produced, if our theory is correct, by the humoral action of

the autonomic system through the transference of the acetylcholin from the periphery. The action of the CO_2 bath on the heart is analogous therefore to physical exertion retaining the advantages of the increased cardiac output per beat and increased nourishment through vigorous improvement in its coronary circulation, but with no bodily muscular exertion, no excessive drive of circulation, through stimulation of the sympathetic system. The arterial blood leaves the heart for the periphery and goes to its peripheral capillaries without the accumulation of a mass of lactic acid from the muscles to be oxydized and the blood also returns to the lungs better oxygenated than after exertion and there is less need for increased pulmonary ventilation. The heart therefore is improved by the CO_2 bath at a minimum outlay to itself and with a maximum gain to its myocardial condition.

CONCLUSIONS

1. In the CO_2 baths the CO_2 is absorbed by the skin and discharged by the lungs, there being no satisfactory evidence to show that the CO_2 is carried by the arterial blood from the lungs.

2. The autonomic nervous system acts by a humoral distribution of chemical substances to produce its nervous stimulation.

3. These chemical substances can be secreted in one area of the body and be carried by the bloodstream and produce their action in a more or less remote area.

4. There seems to be a probable, though as yet unproven occurrence of this remote humoral action in the CO_2 baths. The acetylcholin secreted by the parasympathetic peripheral dilator nerves, protected from destruction by the greatly increased CO_2 tension, being transported from the periphery by the venous blood, to act on the vagal mechanism of the heart.

5. Plain water warm and hot baths and CO_2 baths increase the cardiac output. The plain water baths act chiefly through stimulation of the sympathetic system by increasing the output per minute, more than the output per beat. The CO_2 bath increases the output per beat through the parasympathetic mechanism of the heart.

Another difference between the plain water and CO_2 baths is that the plain water baths affect the coronary circulation

comparatively little, while the CO₂ baths benefit the heart by increased coronary circulation through increased stroke volume

and with little demand on the circulation from increased bodily metabolism.

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REFERENCES

1. Cannon: The Autonomic Nervous System, *The Lancet*, May 24, 1930, p. 1109.
2. Cannon: Chemical Mediation of Autonomic Nerve Impulses, *Science* 78:43, 1933.
3. Cannon: The Story of Our Idea of Chemical Mediation of Nerve Impulses, *Am. Jour. of Med. Sci.* 188:145, 1934.
4. Hering, H. E.: *Die Karotis Sinus Reflexe Auf Herz u. Gefässe*. Leipzig, 1927.
5. Heymans, Bouckaert, and Regniers: *Le Sinus Carotidien et la zone Homologue Cardio Aortique* (with bibliography). G. Doin et Cie, Paris, 1933.
6. De Castro: Quoted by Heymans; *ibid*.
7. Groedel, F. M.: *Wirkung von Kohlen Saurebadem auf den normalen und Pathologischen Kreislauf apparat*. p. 108. *Herznervosen und moderne Kreislauf therapie*, IX. *Fortbildungs Lehrgang in Bad Nauheim*, 16-17, September, 1932.
8. Groedel and Wachter: Ueber d. Gasstoffwechsel in Susswasser, Sole, Luft u. Kohlensauren wassen u. Gasbad.—*Balneologie*. Neue Folge. Heft 16, 1929.
9. Harpuder: Ergebnisse der Innere Med. und Kinderheilkunde, 42:100, 1932.
10. Grollman: *Cardiac Output of Man in Health and Disease*. Charles C. Thomas, Baltimore, 1932.
11. Anrep and Segall: The Regulation of the Coronary Circulation, *Heart* 13:239, 1926.
12. Loewi: The Humoral Transmission of Nervous Impulses, *The Harvey Lectures*, Baltimore, 218. 1932-33.
13. Kuntz: *The Autonomic Nervous System* (with bibliography). Lea and Febiger, 1929.
14. Alles: Physiolog. Significance of Cholin Derivatives, *Physiological Reviews* (with bibliography), 14:294, 1934.
15. Kuré: Quoted by Alles; *ibid*.
16. Krogh: *The Anatomy and Physiology of the Capillaries*. Yale University Press, New Haven, p. 171, 1929.
17. Liljestrand and Magnus: Wirkung des Kohlensaurebades bei Gesunden, *Pflügers Arch.* 193:527, 1922.
18. Hediger: Experiment Untersuch. uber d. Resorption der Kohlensäure durch die Haut., *Klin. Wochenschrift*, 1928, No. 33.
19. Bornstein, Budelmann, and Rönnell: *Minuten Vol.* d. Herzes, *Z. Klin. Med.* 119:596, 1931.
20. Winterstein and Fraenkel-Tessmann: Ueber d. Wirkung v. Badem auf Kreislauf, *Z. Klin. Med.* Bd. 123.
21. Dale and Gaddum: Denervated Voluntary Muscles, *J. Physiol.* 70:143, 1930.
22. Feldberg, Minz, and Tsudzimura: The Mechanism of Nervous Discharge of Adrenalin, *J. Physiol.* 81:286, 1934.
23. Minz: Untersuch. auf Blutegel preparat, *Archiv. f. Exper. Path. & Phar.* 168:292, 1932.
24. Kraitmair: Eine neue Klasse cholin ester. *Arch. F. Exper. Path. und Phar.* 164:346, 1932.
25. Budelmann: Zu einfluss v. Badem auf d. Kreislauf des Herzkrancken, *Verhand. Deutsch. Gessellschaft f. Kreislaufforschung*. VI. Tagung., 1933.
26. Bauer, Dale, Poulsson, and Richards: Control of Circulation Through Liver, *J. Physiol.* 74:343, 1932.
27. Voigt: Ueber den Einfluss heisser Teilbäder auf das Herzminuten volumen, *Z. Klin. Med.* Bd. 124.
28. Bayliss: *The Vaso Motor System*, Longmans, Green & Co., New York, 1923.
29. Bainbridge: *Wright's Applied Physiology*, Oxford University Press, 1929, p. 270.
30. Anrep and King: The Significance of the Diastolic and Systolic Pressure for the Maintenance of the Coronary Circulation, *Journal of Physiol.* 64:341, 1927.

SOVIET PLANS MEDICAL ZOO

A mammoth zoological garden whose inhabitants will annually be sacrificed to the cause of science at the rate of 9,000 dogs, 7,000 cats, 21,000 rabbits, and 16,000 porpoises will be only one feature of the new medical center which the Soviet plans to start building on the outskirts of Moscow this coming spring, according to a dispatch from Moscow to the *New York Sun*.

According to plans this will be the medical center of medical centers, and will automatically bring the Soviet Union to the front in the field of experimental medicine. The entire layout will cover about 1,000 acres, comprising separate but co-ordinated institutes devoted to research in morphology, physiology, psychology, biophysics, biochemistry, and pathology.

The headquarters building will contain a library of 600,000 volumes and an auditorium seating 1,500 people. A clinic will contain 600 beds and there will be almost one laboratory for every patient, allowing the maximum amount of attention to each case. Apart from the laboratories and clinic will be a section of apartment buildings to accommodate 12,000 people, including 5,500 doctors, research workers, and nurses.

One of the ultra-modern features of the center will be a laboratory in which healthy patients may be subjected to the atmospheric conditions of various climates, ranging from

the arctic to the subtropics, while doctors study their reactions. Thus it will be possible to determine, theoretically at least, what diets are best in various climates for people engaged in various activities.

In "the clinic of healthy and sick man" scientists will determine the effect upon people in various states of health of working, eating, and sleeping.

Before drawing up plans for this ambitious center the All Union Institute of Experimental Medicine sent a commission to the United States to study the work of the medical centers at Cornell and Columbia and the Rockefeller Institute, and it is probable that a representative of the New York city health commission will visit Moscow next spring to give consultation.

While the Soviet Union is still greatly handicapped in the field of practical medicine by lack of capable physicians and of medical supplies this condition has not been allowed to retard progress in the province of experimental medicine.

The plans of the Soviet for the development of the system of "state medicine" are almost limitless and the new medical center will form an indispensable part of the system.

The buildings and the equipment, much of which may be bought in the United States, will cost about 150,000,000 rubles. The center should be in full operation by 1939.

TREATMENT OF DIABETIC COMA

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The principles guiding therapy in diabetic coma have changed completely during the last decade. Ten years ago, acidosis was the synonym for diabetic coma accepted by the clinician. At that time, the main effort at controlling this disturbance, which was usually fatal, was the administration of bicarbonate of soda in large amounts by mouth, vein, rectum, and hypodermoclysis. This was done for the purpose of forcing the elimination of accumulated acid by way of the kidneys and providing an adequate amount of base for internal respiration. Bicarbonate of soda is just as useful today in this regard as it was ten years ago, but it has become unnecessary since diabetic coma is no longer treated as an acidosis but as a diminished power of the body to assimilate glucose.

Insulin, perfected by Banting, Best, and the Toronto group of scientists, has enabled physicians to manage diabetic coma, not as a poisoning by acid, but as an intoxication due to the marked impairment of the ability of the tissues to utilize glucose. This principle was appreciated long ago but it could not be applied because, without insulin, clinicians could not light the fire of the carbohydrates in which the fats must be consumed. This can be accomplished now, so successfully that most cases can be revived within a few hours.

The most important point in the successful treatment of diabetic coma is the proper use of insulin; this matter will be taken up first and the remaining parts of the treatment subsequently.

The early treatment of this condition is very essential. Diabetic patients should be instructed that if they have an infection if they become subject to nausea or vomiting, if their respiration becomes deeper than usual, or if they feel out of sorts in any way, they should inform their physician immediately.

Insulin should be administered in comparatively small doses and at frequent intervals. In this way, more carbohydrates are digested per unit of insulin than with a single large dose, a huge amount of insulin

at one time—100 to 400 units as have been given—may result in hypoglycemic reactions for many hours subsequently, this is a real danger which has to be guarded against, it is worth remembering that more insulin can be given with an almost instantaneous effect on the carbohydrate metabolism, but insulin cannot be removed from the body, nor can extremely large doses be readily compensated for by the ingestion and intravenous injection of glucose. The first dose of insulin should be given partly by vein to insure immediate results, and partly subcutaneously so as to prolong its action, 20 units by vein and 20 units subcutaneously is usually sufficient.

After this initial treatment insulin in doses of 10 to 20 units should be given subcutaneously every hour or two hours. The amount and the frequency of the doses are regulated in the first place according to two signs: the depth of the respiration is a good measure of the persistence and intensity of the acidosis, another criterion of the effect of insulin upon the coma, naturally, is the degree of recovery from the unconscious state.

In the second place, the result produced by the insulin should be judged by an hourly or two hourly careful examination of the urine. This should be obtained by catheter if necessary. The urine is examined for sugar and for diacetic acid. If glucose persists in the urine in appreciable quantities, the hourly or two hourly subcutaneous injection of insulin is continued. When sugar is present in the urine in only small amounts and there is need for further insulin effect, then glucose must be given by mouth, vein, or subcutaneously in order to furnish the injected insulin sugar upon which it can act. The subject of the administration of glucose in diabetic coma will be taken up in greater detail later on.

The presence of diacetic acid in any specimen of urine as shown by the ferric chloride test calls for the utilization of more glucose and consequently the continued use of insulin. The same is true of the persistence of the physical signs of

coma; viz.: unconsciousness and the deep breathing.

The careful and painstaking procedure according to this outline usually results in the recovery of consciousness within a few hours.

The equipment necessary for this treatment should be kept in readiness by every physician. It consists of two four-ounce bottles—one of Benedict's solution and one of ferric chloride solution of 10 per cent or stronger—four test tubes preferably of pyrex glass so that they will not break on heating, one alcohol lamp, 400 units of insulin, and a hypodermic syringe. This is all that is essential for emergency use.

The determination of blood sugar and the CO_2 combining power of the blood, are exceedingly valuable and comforting determinations for the guidance of treatment. However, they are not absolutely necessary. Furthermore, unless the patient is in a hospital with adjacent and functioning laboratories, the reports would come in too slowly to be of much help. Decisions must be made regarding the regulation of insulin and glucose every hour or two, and the results of laboratory tests that are reported late during these intervals, are past history and not of great value for the control of the immediate handling of the situation.

Although it interrupts the flow of thought, I should like to call attention here to a matter which Dr. Bolduan of the Department of Health in New York City called to my attention. Dr. Bolduan sent out questionnaires regarding the diagnosis and treatment of cases of diabetic coma which terminated fatally. Many of the answers indicated that the patients had succumbed to diabetic coma without receiving insulin.

According to the answers given, this astounding fact apparently is not the error of the physicians, but is due to the unwillingness of patients or their families to submit to insulin therapy. Why there should be this deep-seated objection to the life-saving benefits of insulin, it is difficult to understand. However, from these questionnaires it becomes perfectly evident that the education of diabetic patients and their families must be carried out more effectively. The same antagonism to the use of insulin is being encountered as there has been to other life-saving measures such as vaccination and diphtheria antitoxin.

When the urine becomes free of diacetic acid, the patient returns to consciousness and the breathing is no longer deeper than normal, then insulin may be given three or four times a day and an appropriate diabetic diet resumed.

While the insulin brings about the adequate utilization of glucose, and through this, the complete oxidation of fatty acids and does away with the acidosis and coma, there are certain urgent effects of the inability to assimilate glucose in the comatose patient that must be taken care of. Some patients never recover consciousness although they are relieved of the acidosis, and others succumb after the coma is set aside, to the ravages which the diabetes and acidosis have imposed upon them. Such complications are attributed principally to dehydration. The dehydration comes about in diabetes largely through the polyuria incident to the elimination of glucose, and to the loss of basic material accompanying the excretion of excessive quantity of acids in the urine. Marked dehydration results in a rapid pulse rate, low blood pressure, impaired cardiac power, diminished surface temperature, oliguria, and constipation.

Great care must be taken to meet these complications so as to prevent a fatal issue which may occur even though the coma itself has been overcome.

Every patient should be kept as warm as possible by the usual methods. Fluids should be administered in good quantities by mouth, subcutaneously, or intravenously; possibly all three methods may be employed. At times there is vomiting or gastric distention. In this event the stomach may have to be washed out and only the intravenous and subcutaneous routes used for the administration of fluid. The fluid should consist of saline solution, according to the precepts given by Peters and his co-workers, to aid in the restoration of the proper acid-base equilibrium of the body and also to favor the retention of fluid.

There is some controversy as to whether glucose should be routinely administered, or not. It has been the author's belief that glycosuria favors polyuria and therefore there is a loss of fluid to the body when sugar is present in the urine. Furthermore, it would seem entirely superfluous to add glucose when the quantity of insulin administered to the patient has not

succeeded in utilizing the excess of sugar which already exists within the body. Consequently, glucose has been given only when the urine showed a low concentration of sugar, approximately less than 0.5 per cent, and when further immediate administration of insulin was indicated. This method of balancing insulin and glucose has proved to be satisfactory.

For the cardiovascular involvement, we have resorted to digitalis with the idea of digitalizing the patient within 24 to 48 hours. When insulin was first employed in the treatment of diabetic coma, it was our experience that some of the cases succumbed to pneumonia after the coma had been set aside. The impression was gained that this was the result of pulmonary congestion existing during the period of unconsciousness. Since digitalis has been resorted to, the pneumonic com-

plication has been absent. The rapid pulse rate, the low blood pressure are nearly always present in diabetic coma and are ample evidence of the need for cardiovascular stimulation.

If rapid response is not obtained after the first rush of activity in caring for these patients is over, it is necessary to think of possible complications, as the presence of infection, an over-active thyroid, apoplexy. Such co-existing diseases have to be met on their own grounds and given due attention.

The treatment of diabetic coma has, through the availability of insulin, become one of the most simple and direct therapeutic problems in medicine. It is exacting in its demands upon the physician, the nurse, and the patient, but the splendid results amply reward the effort.

889 LEXINGTON AVENUE

DIABETIC REGIME IN SURGICAL CASES

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The following rules, prepared for the control of diabetes in surgical cases before and after operation on diabetics at the Beekman Street Hospital, are given with acknowledgment of helpful suggestions from Dr. Leland McKittrick of Boston and Dr. Julian M. Freston of New York.

A. CHRONIC CASES

The day before operation: Regular diabetic diet covered by insulin so as to make sugar-free or nearly so. Do not lower blood sugar quickly, especially in old arteriosclerotics, and do not aim for too low blood sugar before operating. Diabetics stand surgery better with a fair amount of blood sugar—150 to 200 mgms. is probably ideal. This is frequently associated with faint traces of sugar in the urine—cloudy green reductions, or even a little orange color.

The day of operation: Fluids—broth, tea, coffee, and water—are forced until two or three hours before operation. Usually no insulin before operation if sugar and acidosis are controlled. If not controlled, treat every hour or every two hours by orange juice or ginger ale (6 ounces) and insulin according to color

formula in urine—15 units if red reduction, 10 units if yellow reduction, 5 units if green reduction, until controlled. If this method does not control acidosis, then treat as in acute cases, as gastric absorption may be delayed due to nervousness. Orange juice taken two or three hours before operation may be vomited unchanged during operation.

Postoperative: 50 grams of glucose in 1000 c.c. saline in operating room, or as soon as patient has reached his own room, together with insulin—20 units subcutaneously. *One hour later*, 5 or 10 units of insulin according to the severity of the case. Patient should be catheterized and specimen discarded as quantity of sugar due to usual spilling immediately following infusion may be poor index to insulin dosage, permitting too much insulin and consequent hypoglycemia. *Two hours later*, insulin 15, 10, or 5 units according to color formula in urine probably catheterized. *Four hours later*, repeat urine and insulin according to color formula. *Six hours later*, carbohydrate is begun by mouth with insulin p.c. according to amount taken and color formula in urine.

AN EXAMPLE: Gruel—4 ounces (carbo-

hydrate 12) or gingerale—6 ounces (carbohydrate 10)—insulin 5, 10, or 15. Repeat every 2 hours until regular or soft diet with insulin to cover. If not taking fluid by mouth six hours postoperative, repeat glucose by vein with insulin. 100 grams of carbohydrate by mouth or vein each twenty-four hours postoperative. May continue 50 grams of glucose in saline by vein with insulin regime B.D. ad lib if necessary because of vomiting or acidosis. Watch and wash the stomach.

B. ACUTE CASES—DEHYDRATION, VOMITING, AND ACUTE INFECTIONS

Surgical success depends on early operation. Don't wait for ideal conditions. Best treatment for acidosis is removal of infection. Usually cannot get sugar-free or low blood sugar.

Surgical Diabetic Régime—Preoperative: Wash out the stomach in acute abdominal cases or any severe acidosis. Give 20 units of insulin subcutaneously and 50 grams of glucose in 1,000 c.c. saline and go ahead.

Postoperative: Treatment same as that given for chronic cases except that more fluid may be given by vein or additional saline subcutaneously. Rectal absorption doubtful.

Twenty-four hours postoperative: Liquid diet ad lib with insulin and food according to color formula—gingerale, tea with or without sugar, broth or gruel preferable to orange juice.

C. ALL CASES

All cases are treated according to severity, mild cases and minor surgery requiring only small amounts of insulin with glucose by mouth before and after operation.

Blood Sugar: Preoperative ideal: 150 to 200. Postoperative ideal: 110 to 160 because infections heal better with a low blood sugar.

Urine: Preoperative ideal: few tenths of glucose. Postoperative ideal: sugar-free.

Anesthesia: Coma in surgery may be caused by chloroform, too much ether, restriction of carbohydrates and water. Spinal anesthesia, gas and oxygen, or ethylene gas are probably best.

Exercise: In bed as soon as possible, out of bed as soon as permissible.

Sedatives: A restless patient probably needs fluids or glucose. Better restless upstairs than at rest downstairs.

161 EAST 64TH STREET

PROTESTS PAY

There is a lesson for physicians attending C.W.A. employees in the experience reported by the *Westchester Medical Bulletin*. It seems that early in the summer physicians who had been certified by the County Society to render compensation services for employees of the Civil Works Administration began to receive payments on the bills they had submitted to the C.W.A. All of these bills had been arbitrarily cut by the U. S. Employees Compensation Commission, some of them as much as 50 per cent and a remittance sent to the doctor with a curt note to the effect that he could take this payment in full settlement of his claim and like it.

On July 25, the committee, with the knowledge of the local C.W.A. administrator, issued a statement of protest to the Compensation Commission in Washington, asserting that this was an outrageously high-handed policy. The Commission responded on July 31 requesting the names of a number of cases illustrating the protest. On August 8 the committee submitted about twenty cases and requested a report on them. To date they

have heard nothing further from the Commission, but have learned with considerable satisfaction that some of the local physicians have received supplementary checks on accounts which they had been told were "settled" by the first payment.

Nothing indicates that these supplementary payments are a national policy of the Commission and this shows very concretely the value of the Society's making strong protest whenever its members are imposed upon.

The astonishing fact that "the sewage from population centers having 8,393,000 people is discharged untreated into the waters of the State," is revealed in a report of the State Planning Board sent to the Legislature by the Governor. And "in addition, there is much preventable pollution from industrial wastes. Legislation for the control of pollution should be strengthened."

The planning board, headed by Dr. A. R. Mann, provost of Cornell University, was created last March at the instance of the National Resources Board, and will submit its final report to the Legislature April 1.

GASTROJEJUNAL OR MARGINAL ULCER

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Gastrojejunal or marginal ulcer presents a condition which is admittedly difficult but is of real interest to the surgeon. The operation of gastrojejunostomy, at one time regarded as one of the most beneficial of surgical procedures, is now considered by many surgeons as an unjustifiable measure in the treatment of peptic ulcer especially when confronted with hyperacidity, patent pylorus, and negative six hour barium meal retention as found on x-ray examination. On the continent of Europe gastric resection has largely replaced the short-circuiting operation, but in Great Britain and in America, the surgeons have not swung over to the more radical practice, at least in the treatment of duodenal ulcer.

Apart from the persistent dyspepsia which is the common lot of sufferers from gastrojejunal or marginal ulcer, certain alarming and disabling complications are frequently encountered. The more important of these will be mentioned.

Recurring hemorrhage is the most frequent and the most difficult phase to treat. It calls for surgical treatment preceded by blood transfusion.

Perforation into the free peritoneal cavity in gastrojejunal or marginal ulcer, while uncommon, is always serious owing to difficulties of satisfactory closure without compromising the gastrojejunal outlet. A second operation, which presents a formidable technical problem, is usually required to treat the ulcer if the more immediate dangers are survived.

Subacute perforation with the formation of an inflammatory mass, situated to the left of the umbilicus, calls for conservative treatment until such time as the inflammatory reaction has subsided. Thereafter, surgical interference must be undertaken. If the local conditions permit, the region of the anastomosis must be freed and a partial gastrectomy performed. When the patient's general condition is poor, and inflammatory infiltration of the mesocolon and root of the mesentery is

such as to present formidable obstacles to a safe resection, the author has found that reasonably good results follow a double short-circuiting operation, viz., a gastroduodenostomy to exclude the old ulcer, and a duodenojejunostomy to exclude the region of the gastrojejunal or marginal ulcer.

PENETRATING GASTROJEJUNAL OR MARGINAL ULCER

The usual location of the ulcer is just at the stoma, alongside of it or just beyond. Occasionally, however, the ulcer may be found in the jejunum proximal to the stoma. In such cases, it may penetrate into the mesocolon and the posterior abdominal wall, just as a posterior gastric ulcer penetrates into the pancreas. Excision of such a penetrating ulcer may lead to a wound of the superior mesenteric vein and it should not be attempted. In a very pronounced example of such an ulcer in the proximal loop, a completely satisfactory result followed the removal of the gastroenterostomy stoma, closure of the stomach and the jejunum, the establishment of a gastroduodenostomy opening to exclude a stenosing duodenal ulcer, and a duodenojejunostomy to short-circuit the gastrojejunal ulcer.

One of the most important complications in our series of cases is the occurrence of secondary duodenal stasis which is verified by x-ray examination in both the pathological and clinical pictures of many cases of gastrojejunal ulcer and especially cases of long standing. The tendency to thickening and fibrosis in the region of the stoma leads, on the one hand, to a gradual narrowing, and in some cases a potential, if not actual, occlusion of the gastroenterostomy opening, and, on the other hand, to an inflammatory induration of the root of the mesentery which interferes with the efflux from the duodenum. In the treatment of such old-standing cases special measures must be taken to drain the partially obstructed duodenum if complete

relief is to be gained. In some cases, drainage of the duodenum by the establishment of a duodenojejunostomy stoma may be all that is necessary; in others, this operation must be associated with a direct attack on the gastrojejunal ulcer and the original stoma.

PATHOLOGY

The pathological characters of these ulcers are identical with peptic ulcers seen in the stomach or duodenum. A few cases of acute ulceration are seen; these are either operated upon for severe hematemesis or are discovered postmortem after a perforation or death from some other cause; they are, therefore, usually found shortly after operation. In a series of cases given by Walton,¹ he found, that in 3 of the 79 examples, there were intervals of one month, one month, and five months, respectively, after the first operation. In such cases there are one or more areas of sharply cut but irregular ulceration involving only the mucosa but tending to encircle the anastomotic area. The edge of the mucosa may be free or only lightly attached to the underlying tissue and there is little or no induration around. The surface may be covered with a sloughing material, and small areas of hemorrhage or a small eroded vessel may be visible. Rarely in these early stages, an acute ulceration may progress to perforation, in which case, a relatively acute necrosis with but slight reactionary induration is seen.

Long-standing ulcers have all the characteristics of the chronic peptic ulcer, being deeply cut and penetrating. They tend to be circular, the mucosa is turned in and attached to the edge of the destroyed muscle, the floor is formed either of thickened peritoneum or some adherent neighboring structure, and if sections of it are cut there is a complete absence of muscle fibre. There is much infiltration and fibrosis, at first, of the surrounding wall of the stomach and jejunum, and later of adherent tissues such as the mesocolon, or anterior abdominal wall. They are usually single and may be localized or extend nearly around the anastomosis. If single they are most commonly at the extremities where the afferent or efferent loop is united to the stomach, but in some of the cases where the primary operation was performed, they were situated at the middle

of the anastomosis. In some cases they are multiple, as many as three or four having been reported.

ETIOLOGY

It has long been recognized that these ulcers are much more common in males, and this sex distribution seems to be more evident in the more recent series. In Paterson's series² the sex was mentioned in 50 cases, 39 being men and 11 women. Hurst and Stewart³ state that there are about 6 males to 1 female. Walton¹ reports that in his 79 cases, there were only 7 females, and in 30 in whom he had performed the first operation only 1 female. Huddy⁴ found that in 129 cases of duodenal ulcer that 56 (42 per cent) showed a family history. Hurst and Stewart³ have shown that this inherited tendency goes deeper than the actual ulceration and that it is the variety of gastric function which runs in the family, a view which is supported by Apperly and Norris⁵, who investigated carefully a series of families comprising 86 individuals.

Most of these cases consisted of men of middle age. No definite reason can be given just why this condition occurs more frequently in men than in women. The important factor as to the cause of this condition has not been definitely proven by clinical experiment but seems to favor the presence of hyperchlorhydria. The following men greatly contributed facts through their experiments on animals to attempt to prove this to be true, Montgomery,⁶ Mann and Williamson,^{7,8} Matthews and Dragstedt.⁹

SYMPTOMS

Frequently this condition is not diagnosed until perforation or penetration has occurred. In the most recent series these complications are much rarer, for the symptoms of non-penetrating ulcers are now well recognized and the condition treated.

Clinically, there are two groups. In the first, the dominant symptom is hemorrhage. This may occur as a mild hematemesis or melena shortly after operation, or the patient may continue in a fair state of health for a year or more and then have a sudden severe loss of blood, generally in the form of melena. Walton¹ believes that all such cases have marginal ulceration, but at this stage, it may be only

acute, it may be readily overlooked at operation or even, indeed, at a postmortem examination

In the more common variety, there is in the earlier stages only a minor degree of discomfort, fullness, or flatulence, which is later replaced by a definite pain, at first thought to be that of the old duodenal ulcer. It simulates the original lesion in that it becomes periodic. It is severe, occurs late after food, is relieved by food, and often wakes the patient at night. A careful investigation will show, however, that the pain differs from that of a duodenal ulcer in that it is often referred to the lower abdomen, and especially to the left iliac fossa, and that vomiting, which is so rare a symptom with uncomplicated duodenal ulcer, is often present and generally gives transitory relief to the pain. In the later stages, as the ulcer penetrates, the pain becomes more and more severe and much more constant. It may, indeed, become agonizing and the patient may pass into a stage of deplorable misery. In the cases reported by Walton,¹ 73 of the 79 experienced pain. It must, therefore, be regarded as the most frequent and characteristic symptom. Vomiting, generally giving temporary relief, was present in 46 cases. In the earlier stages, the patient retains his appetite and the test-meal shows a high acidity. Later, when the pain becomes more severe, his appetite may begin to fail.

SUMMARY

(1) It has been frequently stated by writers and speakers that a diagnosis of gastrojejunal or marginal ulcer is a very difficult one to make by x-ray examination. The author believes that the difficulty arises from the lack of close co-operation between the internist, surgeon, and roentgenologist. It is his opinion that the elimination of this condition requires the greatest amount of united study and consultation by these experts to make a correct diagnostic conclusion. In our personal experience, although the direct evidence of gastrojejunal or marginal ulcer is lacking from the x-ray standpoint, nevertheless, the indirect evidence must be fully appreciated since we are all aware that the roentgenologists often overlook the diagnosis of ulcers, especially duodenal ulcers, which would seem fairly large on visual examination after opening the abdomen.

(2) It is the author's belief that it is quite generally conceded that the main factor in producing gastrojejunal or marginal ulcer after a gastroenterostomy is the same as that which produced the original ulcer. Since the characteristic local lesion may be the only discernible evidence of the disease after death, it has consequently been ascribed to purely local causes, viz., vascular, traumatic, bacteriological, and biochemical in addition to the higher acidity which has already been mentioned.

(3) A very high gastric acidity should be regarded as a contraindication to gastroenterostomy—a gastroduodenostomy by a plastic operation if the ulcer is small.

(4) For many years, we have all been aware that septic foci should be cleared up absolutely in all cases.

(5) Partial gastrectomy with removal of the stoma is undoubtedly the method of choice in gastrojejunal or marginal ulcer but gastric sequestration has to be performed when dense adhesions over the distal half of the gastric and first portion of the duodenum make it impossible to perform partial gastrectomy.

(6) The frequent occurrence of secondary duodenal stasis and even ileus and the necessity for the relief of these symptoms is emphasized.

CONCLUSIONS

The various ingenious experimental devices which have been used to produce acute peptic ulcers or erosions in the lower animals, in my opinion, have been of no aid, whatsoever in presenting a possible cure for these ulcers appearing in human beings. The emotional or psychic aspect of the ulcer problem has been frequently emphasized in the past. The relation of the parasympathetic discharges and vagotonia to the primitive emotions has been only partially understood within recent years. One of the most interesting and instructive papers on this subject has been written by Dr. Harvey Cushing¹¹ of Boston. He reported having lost 3 patients suffering from acute perforations of the upper alimentary canal soon after what appeared to be successful operations for the removal of intracranial tumors of the cerebellum. Experimental neurogenic ulcerations, especially those of the peripheral nerve of the stomach, and, secondly, the effect of factors such as dietary indiscre-

tions, excessive usage of tobacco in those highly strung persons who are inclined to nervous instability classified as parasympathetic (vagotonic) caused by undue emotion, or repressed emotion, incidental to continued worry associated with anxiety and heavy responsibility, have results wholly comparable, viz., hyperacidity often leading to ulcer.

We are observing more cases of gastrojejunal or marginal ulcer today than we did ten to fifteen years ago. These cases depress me, personally, because they look the picture of despair, suffer untold mental agony as well as very severe gastric pain and distress. Unfortunately, they have often been told by the operating surgeon that their ulcer disease and all its sequelae will be cleared up by operation. There is no operation that is more difficult technically than that for gastrojejunal or marginal ulcer with its definite fibrosis and the whipping around of sheets of peritoneum surrounding the jejunum. Even entering the abdomen is sometimes a difficult feat since, after the incision has been made down to the parietal peritoneum, rake retractors must be used on the muscles and dissection must be made underneath them, and over the parietal peritoneum in order to find a favorable opening in the peritoneal cavity, since the omentum is adherent to a large portion of the abdominal wall. In many of these cases we have been content to disassociate the gastrojejunal anastomosis by closing the apertures with sutures, dividing the

stomach directly across, and sequestering the distal half since it was technically impossible to remove it.

The author is firmly convinced that almost 20 per cent of the operative procedures of gastroenterostomy performed in those cases of persistent high percentage of acid and with little or no retention of the six-hour Barium meal with a patent pylorus, have been followed by a gastrojejunal or marginal ulceration. Probably 25 to 30 per cent of the gastrojejunal anastomotic operations have been entirely cured. In the remaining 50 to 55 per cent of gastrojejunal anastomosis, the patients have had attacks probably due to indiscretions in diet and alcoholic and tobacco excesses. Undoubtedly the operation of gastrojejunostomy for the cure of gastric or duodenal ulcer is a very serious surgical procedure and should be undertaken only as a last resort after a careful consultation of internists and roentgenologists who feel that the patients are not improving under their treatment.

In those hospital services where gastroenterostomy is the cure-all for all the duodenal and gastric ulcers instead of utilizing gastrectomy of the Continental type, the Deaver-Judd pyloric plastic or Finney pyloric plastic technic, one's imagination is not required to be stretched very far to see the many physical wrecks who will emerge from the condition resulting from gastrojejunal or marginal ulcers associated with its complications and its sequelae.

28 EAST 72ND STREET

REFERENCES

1. Walton, A. J.: Gastrojejunal Ulceration, *Brit. J. Surg.* 22: 33, 1934.
2. Paterson, H. J.: Jejunal and Gastrojejunal Ulceration Following Gastrojejunostomy, *Ann. Surg.* 50: 367, 1909.
3. Hurst, A. F., and Stewart, M. J.: Jejunal and Gastrojejunal Ulcers, *Lancet* 2: 742, 1928.
4. Huddy, G. P. B.: A Study of the Family Histories of 300 Patients Suffering from Chronic Upper Abdominal Lesions, *Lancet* 2: 276, 1925.
5. Apperly, F. L., and Norris, J. H.: The Familial Influence in Gastric Function, *Brit. M. J.* 1: 255, 1931.
6. Montgomery, A. H.: Gastrojejunal Ulcer: An Experimental Study, *Arch. Surg.* 6: 136, 1923.
7. Mann, F. C.: The Chemical and Mechanical Factors in Experimentally Produced Peptic Ulcer, *S. Clin. North America* 5: 753, 1925.
8. Mann, F. C., and Williamson, C. S.: The Experimental Production of Peptic Ulcer, *Ann. Surg.* 77: 409, 1923.
9. Matthews, W. B., and Dragstedt, L. R.: The Etiology of Gastric and Duodenal Ulcer, *Surg., Gynec. & Obst.* 55: 265, 1932.
10. Wilkie, D. P. D.: Jejunal Ulcer: Some Observations on its Complications and Their Treatment, *Ann. Surg.* 99: 401, 1934.
11. Cushing, Harvey: Peptic Ulcers and the Interbrain, *Surg. Gynec. & Obst.* 55: 1, 1932.

THE PRESIDENT'S HEALTH SECRET

One marvels at the ability of President Roosevelt to continue healthy while under the strain of grave responsibility and exceptional activity. His attending physician explains the reasons. Twice a year he has a physical examination. He promptly reports to his doctor when he is feeling a little below par. He takes frequent holidays which serve to

change his occupation entirely and which get him away from the constant grind and out into the open. All this has had a great deal to do with his excellent physical condition. Finally, he has a hobby—stamp collecting. It looks, says the *Health Digest*, as if the President has a code for health that many of us might adopt with much benefit to ourselves.

ADVANCED CARDIAC INSUFFICIENCY

Results of Intensive Ambulatory Treatment with Diuretic Measures

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One of the chief problems in the care of the patient with advanced heart failure is probably not the treatment in the hospital. More likely it is the maintenance of the improved state resulting from hospitalization, in order to avoid the necessity for frequent readmissions. The solution would obviously be of tremendous importance, not only to the patient and to his family, but to the institution as well. A very serious difficulty is the general idea that intensive treatment is not possible unless the patient is confined to the hospital where he can be seen daily, and that such measures are dangerous and should be carried out only with extreme reluctance and trepidation.

This is not true. In a previous report¹ the intensive ambulatory treatment of these cases was advocated, and shown to be not only possible, but quite practical. Instead of the customary method of treating these patients intensively only during severe attacks of congestive failure, and of lessening the treatment during periods of improvement, constant care similar to that in the hospital was given. The object was to maintain the patient in at least the same degree of circulatory efficiency with which he went home. More or less continuous treatment was therefore given in our clinic, which is considered an integral part of the hospital service, and not an isolated unit. It was felt that in this way the patient could be kept out of the hospital for much longer periods of time than would have been otherwise possible.

The fact that the symptoms of advanced cardiac disease have a marked tendency to remission is well known. Since new methods of treating congestive failure appear from time to time it is important to bear in mind the results that may be expected from the present procedures in order to have a standard in evaluating any new approach to the problem. As the conservative measures afford considerable hope of comfort to the cardiac invalid, any new method must promise at least as good results, if not better.

The recent work of Blumgart and his associates² on total ablation of the thyroid gland has again focused attention on this subject. In brief, their work is based on the fact that the complete removal of this organ will reduce the metabolic demands of the body to a point where the diminished circulation due to myocardial failure is sufficient for its needs, and compensation is thus restored. They tried out this idea in a number of cases and feel that they have been rewarded by excellent results. They realize, however, that the operative procedure is not a cure, but a palliative measure, and that the patients must be carefully selected. In their cases the course of the disease had been continuously downward, and the patients were incapacitated even during periods of remission. They felt, therefore, that all conservative measures had been exhausted before they decided on operation.

Our experience has taught us to be more optimistic about the results of medical treatment, and we have obtained improvement, at times spectacular, after months and even years of apparently futile treatment. It is extremely difficult, if indeed not impossible, to say when the conservative measures have been exhausted. Failure after the first, or the tenth attempt at diuretic therapy does not always mean that the next time will not produce results.

The object of the present communication is to show that with the lapse of time and with further experience our belief in the efficacy of intensive medical ambulatory treatment has been justified. At the Montefiore Hospital, we have had the opportunity of studying hundreds of cases of advanced cardiac disease of rheumatic, hypertensive or arteriosclerotic etiology, with considerable cardiac enlargement, many with auricular fibrillation and severe congestive failure of long duration. For our present purpose we have selected only those with recurrent congestive failure.

In treating these individuals as ambulatory patients, special emphasis is laid on the fluid and salt intake and on diuretics.

Our experience has shown that in these cases control of water retention is the most important single factor determining their well-being.

Special diet sheets limiting the fluid and salt intake are distributed and explained in detail. At each visit, the patient is questioned as to his adherence to the diet and reminded of its importance. The protein and the total caloric contents are modified according to individual requirements. Salt, and foods rich in sodium chloride, are prohibited. Only three to four cups of actual fluid are allowed in the daily diet, which, including the fluid content of the food, contains about 1,400 c.c. of total water. This is about as little fluid as it is possible to induce patients to take over any period of time. Frequent use is made of the Karrell diet or of a modification.

The importance of the constant intake of one of the "maintenance diuretics" (urea 45 to 70 gm. daily, or ammonium nitrate 6 to 9 gm.) is stressed. One or the other of these is taken continuously, allowing one day a week rest, *even when there is no longer evident edema*, in order to prevent, or at least to retard the tendency to rapid reaccumulation of fluid which these individuals all show. The urea is given in 50 per cent aqueous solution, and the ammonium nitrate in 40 per cent solution or in 0.5 gm. enteric-coated tablets. In spite of the rather unpleasant ammoniacal taste, the patients are usually willing to co-operate and take these drugs for long periods. Although methemoglobinemia and acidosis during the prolonged intake of the ammonium salts have been described,² these complications have not occurred in our cases.

A mercurial diuretic (salyrgan, mercurpurin, or neptal) is given at frequent intervals when indicated, for reaccumulation of fluid, as shown by gain in weight, for congestive symptoms, for attacks of nocturnal dyspnea, and as a diagnostic procedure for latent edema. We have found that there are few contraindications to the use of these drugs, and that with the proper injection technic, their administration, either intravenously or intramuscularly, is not only safe but remarkably effective.

Digitalis and other drugs as the nitrates, xanthine diuretics, sedatives, and the like, are employed when necessary. Although digitalis usually slows the ventricular rate

in auricular fibrillation, and at times in regular sinus rhythm, we have found it to be insufficient in most of our cases to prevent the reaccumulation of fluid and the exacerbation of symptoms. In certain cases phlebotomy or thoracentesis is performed for urgent indications.

We have attempted to instill into our patients the same attitude to their disease that sufferers from diabetes and other metabolic conditions are taught. They are given detailed instructions as to the significance of their symptoms, of fluctuations in weight, and so on, and as to the purpose of dietary and fluid restrictions, and of medications. In this way it has been possible to secure remarkable co-operation from the vast majority of them with ordinary intelligence. Through a special arrangement we are able to treat individual patients in their own homes if they are temporarily unable to attend the clinic. If it is necessary to see them more often than once a week, additional appointments are made at the hospital at our convenience so that treatment may be properly regulated. These additional visits are often of special importance in preventing sudden increase in congestive failure which may require readmission to the hospital.

Under this régime, by continuous observation of the clinical signs and symptoms, but especially the weight and the ventricular rate, these patients can be kept out of the hospital for long periods of time, able to get about, and attend to light duties. Most of them can be kept thus for months and many even for several years before the inevitable breakdown finally occurs. It should be repeated here, too, that these are not early cases, in their first or second attacks of circulatory failure, but that they have had advanced cardiovascular disease for many years, that they have been in more or less congestive failure for long periods, years, and that they have had numerous admissions to various hospitals before coming to us.

We have under our care in the clinic at present, about 150 patients. Of these, 67 have been in severe congestive failure as described above and it is concerning this group that the following remarks will be made. (Most of the others have congestive symptoms, and even edema, but have never been sick enough to be wholly incapacitated. These are not included.)

These 67 cases by no means represent

all we have treated, but only those who are under our care now. It is to be understood that in patients of this type, regardless of treatment, the mortality over a period of a few years is high. We have observed many more individuals during this time, but patients who have died or who have been discharged from our care for other reasons have not been included here.

Twenty-nine were female and 38 male. Thirty-eight were classified as of rheumatic or unknown etiology and 29 in the hypertensive or arteriosclerotic group. The severity of the disease is clearly indicated by the following facts:

TABLE I

Duration of c	1 25 years
Duration of	1 13 years
Period of obs	1 12 years
Number of at	0-5
Months spent	0-57

Many of these patients have had a number of admissions to other hospitals, not shown in these figures.

Table II shows the periods of time these patients have been able to remain out of the hospital since their last discharge, while under the care of our clinic, and receiving the treatment outlined above.

Six patients have never been in the hospital while under our observation, periods of 4 to 8 years.

TABLE II

1 patient has been out of the hospital 9 years
1 patient has been out of the hospital 7 years
1 patient has been out of the hospital 5 years
3 patients have been out of the hospital 4 years
7 patients have been out of the hospital 3 years
11 patients have been out of the hospital 2 years
26 patients have been out of the hospital 5 months to 1 year
2 patients have been out of the hospital 3 months
9 patients are now in the hospital

It can thus be seen that about one third of our patients, who all had at one time or another very severe congestive failure, have been able to remain out of the hospital for two years or more and roughly 85 per cent of the living patients have already been out at least five months in more or less comfort with restricted physical activities.

This is even more striking if we remember that these 67 cases have been selected as the worst of 150 patients with far advanced cardiac disease that all have had congestive failure for long periods of time, and that in all the ultimate prognosis is extremely poor.

The following case was selected as typical of those with which we are dealing,

and illustrating best the treatment principles involved.

I W, man, aged 54. Diagnosis: Arteriosclerosis, hypertension, coronary sclerosis, cardiac enlargement, arteriosclerotic block, auricular fibrillation, congestive failure.

He was first admitted to the Montefiore Hospital on November 18, 1927, complaining of swelling of the legs of four weeks duration. The essential history was of nosebleeds and headaches for two years and dyspnea and palpitation for one year, followed by swelling of the legs and abdomen. He had already had several episodes during which the symptoms showed exacerbations and remissions, always recurring with physical activity. He had already had an abdominal paracentesis at another hospital.

Physical examination revealed the signs of advanced congestive failure with marked dyspnea, cyanosis, venous distention, pulmonary congestion, bilateral hydrothorax a liver 12 cm below the right costal border, ascites and marked edema of the lower extremities. Later auricular fibrillation was noted.

During the next 2½ years before coming under the care of the clinic, his condition was one of almost continuous congestive failure, with short remissions, and prolonged exacerbations. He was admitted to the hospital three times each time improving after treatment, but returning more waterlogged than ever after a short stay at home. At each hospital admission he was kept in bed and given a diet with restricted fluid and salt. He took digitalis continuously. He consumed 70 to 100 gm of urea daily. Attempts to discontinue it were followed by immediate return of symptoms. He received many injections of salyrgan often as frequently as twice a week, usually followed by good diuresis. The right and left chests were tapped at least twelve times. He was finally discharged March 28, 1930, feeling well, weighing 212 lb.

He now came under the care of the clinic, where for the next three months he did poorly. He was seen at intervals of one or two weeks, took urea constantly and received salyrgan at almost every visit. In spite of good diuresis from the latter drug he continued to accumulate fluid so that by July 7, 1930, he was extremely waterlogged, weighed 246 lb and showed all the signs and symptoms of advanced congestive failure. Medical treatment had apparently failed.

Nevertheless the same measures were continued even more intensively and the results are shown below. For the next three weeks he was seen at home at frequent intervals and kept in bed. In addition to urea and digitalis he received five injections of salyrgan. When he returned to the clinic he had lost 21 lb and felt very comfortable.

From then on for over four years he has done remarkably. He has consumed approximately 300 lb of urea and attempts to discontinue it are invariably followed by gain in weight and dyspnea. Digitalis has easily controlled the ventricular rate. At first he was seen every week and received salyrgan at almost every visit. As he improved he was seen less frequently, and received fewer injections of salyrgan. This can readily be seen from the fact that in the last six months of 1930 he received salyrgan ten

times; in all of 1931 he received five injections; in 1932 he had four, and in 1933 only three injections were given. The last salyrgan was given June 12, 1933. When last seen (August, 1934), he was fairly comfortable and had no complaints. He was able to attend to the household duties for his wife, who is also an invalid, and he could walk from his home to the hospital, a distance of one-half mile up a steep hill. His weight was 202 lb., the lowest in almost five years, and beyond cyanosis and liver a hand's breadth below the costal border, there were no signs of circulatory failure. He was still taking urea and digitalis regularly.

SUMMARY

1. Ambulatory treatment has been applied to a series of cases of advanced cardiac insufficiency over a period of several years. These were individuals with long-standing congestive failure who had hitherto required numerous admissions to various hospitals. We were guided chiefly by observation of the weight, the degree of dyspnea, and the ventricular rate.

2. We found the chief problem to be the prevention and control of fluid accumulation which no longer yielded to digitalis alone. The treatment consists chiefly of the intensive and systematic use of diuretic measures. Restriction of fluid and salt intake is accomplished by specially calculated diets. The so-called "maintenance diuretics," urea or ammonium nitrate, are given constantly to help prevent reaccumulation of fluid. Frequent injections of a mercurial diuretic are used when rapid action is necessary. Digitalis and other drugs are administered when indicated. Through a special arrangement it is possible to treat the patient at his own home if he is temporarily unable to attend the clinic.

3. Our concept of the treatment of these

cases is similar to that in diabetes. The patient must be made to understand the object of each point in the treatment of his disease. Only in this way, with constant vigilance on the part of the physician, can we secure the utmost co-operation from the patient, which is probably the most important single factor in determining our success or failure.

4. The above methods can be successfully used in these individuals while they are ambulatory without any danger, and relatively long periods of well-being can be obtained. The fact that the patients are able to remain in their home surroundings has been of distinct psychological importance. At the same time, the hospital has been enabled to use its beds for a larger number of patients. It is by no means claimed that the improvement obtained in this way, renders the patients less liable to sudden death. Whether or not life has actually been prolonged, we are at present in no position to say. There is no doubt, however, that their existence is made much more tolerable to them.

5. The intensive ambulatory treatment with diuretic measures affords considerable relief for prolonged periods to the great number of cases which do not respond to the usual methods, including digitalis. It is suggested that it be given a more widespread trial.

665 ALLERTON AVENUE

REFERENCES

1. Friedenon, M.: Intensive Ambulatory Treatment of Patients Suffering from Advanced Cardiac Insufficiency, *Med. Clin. North Am.* 17: 241, 1933.
2. Tarr, L.: Transient Methemoglobinemia Due to Ammonium Nitrate, *Arch. Int. Med.* 51: 38, 1933.
3. Blumgart, H. L., Riseman, J. E. F., Davis, D., and Berlin, D. D.: Therapeutic Effect of Total Ablation of Normal Thyroid on Congestive Heart Failure and Angina Pectoris, *Arch. Int. Med.* 52: 165, 1933.

AIR-STAMPS GAVE HIM AN AIR-RIDE

An American physician, Dr. W. E. Aughinbaugh, traveling in Italy, received a large packet of letters from home when he landed at Leghorn, and was amazed a little later, on his way to catch the train to Rome, to be accosted by two officials and taken back to the customs office on the pier. There the customs chief greeted him warmly, as the story runs in the *Chicago Tribune*, and said: "Señor, in looking over your letters this morning, I noticed many American air-mail stamps. My little boy is collecting stamps but he has none of the ones issued by the United States. It was my intention to ask for these stamps when you arrived but I missed you. Will you be good enough to cut them from your

envelope and give them to me for him?"

"Of course, it was impossible for me to refuse," relates Dr. Aughinbaugh. "Angrily I cut the stamps from the envelopes and handed them to him saying: 'You have kept me from going to Rome, where I had hoped to spend two days sightseeing before returning to the ship.'"

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PHASES OF OTOLARYNGOLOGY OF INTEREST TO THE GENERAL PRACTITIONER

MARVIN F. JONES, M.D.

New York City

A paper describing procedures of practical value to the general practitioner is a difficult assignment. My first attempt resulted in the textbook type of discourse, detailing various diseases and a method of treatment. Analysis of my opus demonstrated the reason for its failure was that practically all the treatment advocated belonged in the realm of general medication. The list of remedies having only local value included nothing unusual, nothing particularly new, and certainly nothing that would stimulate the interest of the tired general practitioner.

At dinner preceding the joint meeting of the Pediatric and Otolaryngological Sections of the Academy there was a discussion in which the pediatricians asked questions which to me, an otolaryngologist, were astonishing. "Should a tonsil be removed?"—"What are the indications for removal?"—"Are patients benefited by removal?"—"What do you do for a common cold, if anything?"—"Does sinusitis ever become cured?"—"Of what value are operations on the sinuses?" These are a few samples.

There is a tendency to accept the answers to these questions with a smug complacency which eliminates them from the argumentative category.

If one were to tell what he does for the common cold, he would see that ordinarily most of the directions would consist of general medication, and that a general practitioner could apply the local remedies just as efficiently as a specialist. Why, then, do patients with colds come to a specialist's office?

In boom times, the physician who by good fortune had escaped the reputed golden lure of a specialty used his office as a bureau of information. If his patient complained of dysmenorrhea, that meant Dr. Brown; rhinorrhea meant Dr. Smith, and gonorrhea, Dr. Jones. The next time his patients needed attention, they were able to dispense with directions, because they had learned the road. When these patients used to arrive at a specialist's

office, they were asked what doctor referred them. Their answer would be Dr. So-and-So. Patients arrive now—occasionally—and when the request is made for the name of the doctor who referred them, the answer is that they were directed by the patient who was referred by his family doctor.

The specialist was created or grew to perfect himself especially in some chosen field. He should be used in consultation when a problem presents itself in general practice. The broader the field, and the more efficient in his realm the general practitioner becomes, the narrower the field and the more useful will be the work of the specialist.

If the family doctor would return to his old position as medical director for his patients, and personally administer to their medical needs, it would benefit all concerned. A consultation when needed should be a source of information and in the nature of postgraduate instruction for the doctor who takes advantage of the opportunity to be present at the examination. At the same time the family doctor would be able to estimate the ability of his consultant, and eventually his files would hold concrete answers to questions such as those listed earlier in this paper.

Dr. Murray Bass gave an illuminating and useful report on about 150 cases of tonsillecтомies which had occurred in his private practice. He knew why he wanted the tonsils removed, because his cases had been studied. He then took his patients to a competent specialist. He made sure that the operations were efficiently performed. He then noted the effect of the operation on the symptoms of which the patient had complained. He reported 88 per cent favorable results.

Impressions are misleading, and should rarely be voiced. When statements can be fortified by facts, they make valuable records.

Many questions have their answer in the records of the general practitioner. The specialist's contact with a patient is usually

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the health and comfort of the ailing multitudes who have a normal mentality."

The important items in local medication are aëration and adequate drainage. To produce these effects, I have used Adrenalin Inhalant. The old formula proved eminently satisfactory. Unfortunately, the new formula has been placed on the market under the same name. In four instances I have observed symptoms resembling adrenalin reactions following its use. An advantage of the old formula is its deterioration. It prevents the patient from using such a strong medication for a routine spray.

Whatever else the use of epinephrine and ephedrine preparations may do, they at least give the patient a sensation of local relief. Patients, strange to relate, appreciate a little relief. And doctors in their scientific enthusiasm are apt to overlook the fact. General medication is most important, but since there are individual preferences, I will not add my preference to the overloaded list.

CAN WE CURE SINUSITIS?

The answer is yes. Do we cure all cases of sinusitis? To this question the answer is no. It ought to be reiterated that until differentiation is made between allergic attacks and infective sinusitis there will be failure in both operative and therapeutic measures. There may be an allergic sinusitis without infection, there may be allergic sinusitis with infection, there may be an infected sinusitis in which the allergic cause has ceased, and there may be an infected sinus with no demonstrable allergic connection. Here again the diagnosis is essential before proper treatment can be instituted.

For my acute sinusitis patients, I order the following routine:

1. Take full glass citrate of magnesia before lunch.
2. Spray the nose every two hours with adrenalin inhalant spray (Parke Davis old formula). Use in a DeVilbiss atomizer.
3. Follow the nasal spray with the Tincture of Benzoin compound steam inhalation.
4. Take two five grain acetylsalicylic tablets every three hours with some food (saline crackers).
5. Drink at least one glass of fluid every half hour preferably fruit juices (lemonade, orange, or grape fruit juice or grape juice with enough sugar to suit taste).
6. Remain in bed.
7. Regular balanced diet.

8. Do not over-indulge in alcoholic drinks.
9. The room temperature should be around 70°, depending upon the humidity for variations.
10. Eliminate contacts with other people.
11. Avoid draughts.

When the patient religiously follows these directions, it rarely becomes necessary to operate on an acute sinusitis. If the original cause of the sinusitis has been allergic, and the patient again comes in contact with the special protein after a cure has been effected, a recurrence is to be expected.

Operations suffer in their results because of recurrent allergic attacks. Proper diagnosis of the underlying factors and intelligent selection of the correct procedure will diminish materially the repeated operations which have unfortunately been too common in rhinology.

One of the most common secondary manifestations of chronic sinusitis is a persistent cough. A prolonged cough may point to a possible sinusitis as the cause.

Pus in the nose or more particularly in the nasopharynx which is present over a protracted period, indicates sinusitis. Transillumination although not diagnostic of sinusitis is a valuable aid. More recently, I have tried fluoroscopy in diagnosis, and it has proven very satisfactory. In suspicious cases I resort to the radiogram. We must always keep in mind that a radiogram sometimes gives us an erroneous impression. It is used as an aid in diagnosis, but is not, of itself, sufficient.

COMMENT

In order to relieve patients of distressing symptoms, it is necessary to make an accurate diagnosis of the cause. It is equally necessary to select the proper therapeutic and operative procedures. (This statement sounds ridiculously trite but good results depend upon the literal observance of its text.)

Undiagnosed allergic manifestations in the upper respiratory tract probably ruin more good results from operations than poor operative technique.

The general practitioner should cultivate more intimate contacts with his consultant and learn by these contacts.

The final answers to most problems are to be found among the records and these records must be used to formulate accurate decisions.

brief, and he is often unaware of the final results. Though follow-up queries are possible a much more satisfactory estimate of a patient's condition may be obtained from the patient by the family doctor.

The questions of whether a tonsil should be removed has been answered in the most effective and conclusive way. When should a tonsil be removed? No tonsil should be removed before a thorough examination, both general and local, has been completed. Better end results would be obtained if this dictum were always followed. There is the common example of the patient who has complained of frequent attacks of "sore throat." Soreness of the throat quite commonly means tonsil trouble to the laity. After the tonsils are removed, the attacks of sore throat may continue. The operative procedure is condemned because the desired result was not obtained. Sinusitis was probably the primary cause of the soreness in the throat, and although a tonsillectomy sometimes helps to cure a sinusitis, it usually will fail.

The objective signs which I have considered important indications for removal of the tonsils are briefly stated:

1. Enlargement of the anterior chain of cervical lymph glands.
2. Recurrent attacks of tonsillitis.
3. Peritonsillar abscess.
4. Pus expressed from the tonsils by a tongue depressor or Hurd's suction tubes. (We all recognize in the last instance that caseous material need not be mistaken for pus.)
5. Recurrent colds of non-allergic origin.
6. Mechanical obstruction to the throat.

A type of case which offers a problem is that of the small buried tonsil without demonstrable infection. I have removed these tonsils as a possible focus for some general infection on the advice of the physician in charge of the patient. Rarely have I been chagrined by the absence of adequate pathology in this type of tonsil.

I prefer to remove tonsils during a period when upper respiratory infections are at a minimum if the situation permits. Tonsils removed in the late spring or early summer afford the patient the advantage of healthier months for convalescence. Sometimes it is advisable to allow only part of the summer for recuperation, but usually the convalescence from a prolonged illness is more rapid if diseased tonsils are removed.

Too little attention has been directed towards the adenoids. Though they deserve as much consideration as the tonsils, they receive little except as an object of routine removal. Even painstaking removal has been neglected. The results of adenoidectomy have been difficult to estimate because of their universal marriage to the tonsil in operative technic. Many doctors advocate the removal of adenoids without removing the tonsils. In some instances the operation on adenoids alone is justifiable, but generally speaking the procedure is inadequate. When the adenoid is removed it should be attended with the same skill as the tonsil. The operation should be done under sufficient general anesthesia to produce relaxation. The catch-as-catch-can method under insufficient anesthesia will not produce adequate results.

Do tonsils and adenoids recur following their surgical removal? Some practitioners will tell the patient that the tonsils and adenoids have "grown back." Rarely do we see the regrowth of a tonsil. The adenoid is more prone to regrowth following an adequate removal. Should the adenoid tissue again become hypertrophied after removal, a thorough investigation of the sinuses will frequently disclose an irritating postnasal discharge.

THE COMMON COLD

Until differentiation between upper respiratory infections and allergic attacks is learned, treatments of the common cold will remain unsatisfactory. Allergic attacks are not limited to the seasonal variety, but may occur at any time during the year or be intermittent during the year. In addition, these allergic attacks are the results of ingested foods as well as inhalants. They produce not only the acute attacks which are easily recognized, but also the sub-acute and chronic symptoms with nasal pathology.

In upper respiratory infections, nearly every one has his pet procedure. A recent publication calls attention to the opiates and their derivatives. It again serves to remind one not only of the sedative effect, but also of the medicinal values of these therapeutic agents. The forbidden heroin with terpin hydrate has never been replaced as a cure for the torturing dry cough. Just another example of the old story: "Legislation for the mentally inadequate few which affects

(85 per cent) This is a credit to the practicing physicians and the community Department of Health The Schuck test as a check on the success of diphtheria immunization had been used very little, (12 per cent) and thus almost wholly among the private patients There is no free clinic in the City where Schuck testing is done

	Total	Free Clinic	Private and Pay Clinic
Tuberculin tests given	900	810	90
Tuberculin tests positive	28 (3%)	22	6
Tuberculosis in family	17	16	1
Tuberculin tests not given	34	3	31
Tuberculin tests given previously	10	10	0

Positive Mantoux tests were found gratifyingly few (3 per cent) The dosage used was 1/10 mg A positive reaction at this age is of importance as it indicates the presence of a comparatively recent infection the source of which may perhaps be traced and removed before further damage is done Few parents refused this opportunity to have the tuberculin test done, especially among the clinic cases Permission was asked in such a way as to make it appear a privilege rather than an undesirable procedure

	Total	Free Clinic	Private and Pay Clinic
Tonsils and adenoids—removal advised	134 14 2%	124	10
Adenoids—removal advised	10 1 %	7	3
Tonsils—observation advised for possible removal later	75 8 %	70	5
Dental care advised	86 9 %	82	4

Whether tonsils and adenoids are sufficiently abnormal to require removal is a difficult matter to decide 142 per cent were advised to have tonsillectomy, 8 per cent more had shown either some evidence of infection, hypertrophy or a history of past infection In these cases the examiner, in attempting to be conservative, asked for further observation of the child before deciding the question

	Total	Free Clinic	Private and Pay Clinic
Nutrition			
Poor	93	89	4
Fair	106	84	22
Good	745	650	95
Development			
Poor	46	42	4
Fair	73	55	18
Good	825	726	99
	30	30	0
	7	5	2
	21	17	4
	79	56	23

Flat feet	131	93	38
Flat legs	5	8	0
Old poliomyelitis	5	4	1
Malformation great toe	1	1	0
Malformation thumb joint	2	2	0
Congenital dislocation (hip)	1	1	0
Poor posture	35	30	5
Lordosis	1	1	0
Web toes	2	2	0
Scoliosis	2	2	0

A surprisingly large number of children were found with pronated weak feet and knock knees The two conditions are frequently found combined This seems to be less often a rachitic deformity than one dependent upon poor muscular development and muscle tone

	Total	Free Clinic	Private and Pay Clinic
Hernias			
Umbilical slight	38	2	0
Umbilical large	4	3	1
Inguinal			
Genito urinary Defects			
Phimosis	46	43	3
Retractions a lised	22	20	2
Circumcision a lised	24	23	1
Undescended testicles	6	6	0
Hydrocele	1	1	0
Stricture urethral orifice	2	2	0
Eyes			
Eye blinking and habit spasm	2	2	0
Eye lid drop	1	1	0
Strabismus	16	14	2
Nearsighted wearing glasses	1	1	0
Ears			
Inflammation	8	8	0
Discharging	6	6	0
Mastoiditis	1	1	0
Skin			
Impetigo	2	0	2
Eczema	2	0	2
Asthma	1	0	1
Bad Habits and Behavior Abnormalities			
Enuresis	25	23	2
Finger sucking	29	24	5
Nail biting	11	7	4
Temper tantrums	10	8	2
Breath holding	4	4	0
Mentally retarded	4	4	0
Defective speech	3	2	1
Sleep walking	2	2	0
Masturbation	2	2	0
Mother fixation	1	1	0
Cases referred to Child Clinic	15	15	0

Correction of undesirable habits and behavior of these children are considered important Those who are not under the care of their private physicians will be followed up in the Behavior Clinic of the New Rochelle Hospital

COMMENT

It is felt that such a campaign for the examination of children of this age is a very valuable public health measure Many conditions are brought to the attention of the parent, which, given proper care, will be helpful in the child's development and good health The establishment of the habit of an annual health examination, begun in childhood and carried through adult years, will be of value to the general health of the community Much loss of school time is prevented by making this examination sufficiently long before the child enters school

By registration of the children in three different groups, according to their economic status, private physicians participate

to a greater extent in this preventive health work.

The combined effort of the local physicians with the Parent Teacher Association when assisted by the Health Department and Fire Department makes it possible to reach and examine large numbers of children.

CONCLUSIONS

1. The number of children from 2 to 5 years of age found needing medical attention was very large (99.5 per cent).

2. Schick testing had been done very infrequently as a check on diphtheria immunity (12 per cent).

3. There was a low percentage of positive tuberculin tests (3 per cent).

4. Large numbers of children with knock knees and weak feet were found (22 per cent).

5. Many behavior abnormalities were found (9.5 per cent).

6. This type of examination is a valuable public health measure.

421 HUGUENOT STREET

CASE REPORT

PROPHYLACTIC TREATMENT IN RABIES

SAMUEL L. ELLENBERG, M.D.

New York City

ABSTRACT

A case of rabies is reported because of the failure of the standard methods of prophylactic treatment in this case and to record the spinal fluid findings.

On July 11, 1934, a 7-year-old boy, J. K., was admitted to the Surgical Division of the Children's Ward of Lincoln Hospital because of an extensive laceration of the right lower eyelid and numerous small bites of the face which were inflicted by a pet dog while the child was asleep. The dog had been in good health but after inflicting the wounds he began to froth and chewed at the door.

Except for the lacerations of the eyelid and of the face the physical examination was essentially negative. There were multiple lacerated wounds of the lower right eyelid, one wound going downwards and laterally from the inner canthus for about $1\frac{1}{2}$ inches causing the lower lid to hang downwards only by its lateral attachments. The other wounds were not so extensive but cut the lid into ribbon-like strips. The lacrymal duct was severed. There was no injury to the eye. There were numerous small bite wounds scattered over the face and beneath the chin.

The wounds about the eye were cleansed with boric acid. This was followed by 20 per cent argyrol which was also dropped into the eye. The wounds were carefully closed with interrupted dermal sutures. The remaining wounds were cauterized with nitric acid followed by aromatic spirits of ammonia.

The following day the dog was reported rabid and antirabic treatment was immediately instituted—a lapse of 36 hours after the infliction of the bite. At first the Department of Health sent up a batch of 14

vials of vaccine prepared according to Semple's method, but when informed that the bite was severe and dangerously near the optic nerve, the Department advised that double the usual dosage should be given instead of the customary 14-21 injections of 2 c.c. of vaccine. Consequently daily injections were given subcutaneously for 15 days, beginning with 2 c.c. and rapidly increasing to 4 c.c. of the vaccine on the third day, where it was held until a total of 57 c.c. was administered.

The child's course in the hospital was uneventful. The wounds were kept clean and healed satisfactorily. At time of discharge from hospital, July 29, 1934 (18 days after admission), a note stated the child was in good general condition and there were no manifestations of rabies.

On August 7, 1934, the patient was readmitted to hospital. Since discharge the child had been well up to 4:00 A. M. on August 5, 1934 (25 days after dog bite), when he woke up complaining of pain in the right ear which persisted to time of admission, except for a slight remission following syringing. He began to vomit about every half hour and could hold no food down. On August 6, 1934, the vomitus became slightly blood-stained and that afternoon a right-sided paralysis of the face was noted. On morning of admission, at home, patient was delirious and developed some difficulty in speech.

Examination of the child on the ward showed he was co-operative, oriented, understood all questions but appeared unable to answer them. Speech was jerky and hoarse, and there was some mild difficulty in swallowing. He appeared quite thirsty, showed

some foamy saliva at the mouth. The left pupil was greater than the right but both reacted to light and accommodation. There was a reddening of the right eardrum. The pharynx was infected and full of mucus, and there was a weakness of the swallowing muscles and a palatal paralysis. The tongue protruded to the right. Slight facial paralysis was present on the right but no stiffness, Kernig, Brudzinski nor Babinski. Lungs, rhonchi present—no other changes. Heart, negative. T, 104, P., 110; R, 24. Laboratory data: Urinalysis showed Albumen +, Sugar +, Acetone +, and a number of leukocytes.

Spinal tap revealed clear fluid under normal pressure—80 cells—mostly lymphocytes, globulin = 0, Sugar, normal.

A member of the Meningitis Division of the Department of Health was called into consultation and his opinion was that the patient had either a high bulbar polio or rabies.

Later that day the child had definite difficulty in swallowing, fluids were regurgitated, and he developed a weak cough which did not appear capable of expelling the fluids from the respiratory passages and upon examination a laryngeal and soft palatal paralysis were found.

With the progress of time the patient continued to be alert but restless, fully cooperative but could not protrude the tongue. Cyanosis of lips became marked and a mild erythema of the face, forearms, and arms developed. Cyanosis and mental clarity continued till the exitus, which came on suddenly that same evening (August 7, 1934).

An autopsy was performed by the medical examiner who reported. "A well developed and nourished male with cyanosis of lips, ears, fingernails. Healed scar at inner side of

right upper lid. Basilar subarachnoid hemorrhage (15 c.c. of blood). Blood vessels of brain and dura congested. Bases of lungs congested. Heart dilated, otherwise normal. Gastro-intestinal system congested. Pancreas congested. Kidney markings congested. Anatomical diagnosis: basilar subarachnoid hemorrhage; general visceral congestion, rabies. Microscopic stain for Negri bodies of Purkinje cells of cerebellum positive and same corroborated by the Department of Health."

COMMENT

This patient developed rabies 10 days after the last injection which would indicate a marked susceptibility of the child or a marked intensity of the infecting virus or a failure on the part of the child to manufacture protective antibodies. It is generally considered that at least 14 days must lapse after the completion of the treatment before immunity is attained. In 95 per cent of the cases treated this immunity is attained but there still remains a group in which the present case can be included that apparently requires a more potent vaccine than is available at the present time.

The various systems of medicine and other medical textbooks do not mention anything regarding spinal fluid findings in rabies. In looking over the case reports in the literature it is curious that in only a small percentage was a spinal tap performed and very few recorded the spinal fluid findings. The spinal fluid report in this case appears to agree with those findings recorded in the literature, viz, a clear, colorless fluid normal or under slightly increased pressure, increased number of cells, mostly lymphocytes, normal sugar, normal or decreased globulin.

250 WEST 21ST STREET

REFERENCES

- 1 Wesson, M. B. *NEW YORK STATE JOURNAL OF MEDICINE*, 104, Oct 1916.
- 2 Geiger, J. C. *California State J. M.*, 14, 230, 1916.
- 3 Berghausen. *Med. Record* 92, 768, 1917.
- 4 Barss, H. DeB. *J. Mich. M. Soc.*, 17, 21, 1918.
- 5 Vaughn, B. *Kentucky Med. J.*, 17, 15, 1919.
- 6 Sample, D. *British M. J.*, 2, 333, 1919.
- 7 Linn, C. H. *Kentucky Med. J.*, 21, 558, 1923.
- 8 Moran, T. A. *J. Iowa Med. Soc.*, 15, 577, 1925.
- 9 Warren, G. A. *J. Arkansas M. Soc.*, 23, 115, 1926.
- 10 Gamble, W. G. *J. So. Carolina M. A.*, 23, 292, 1927.
- 11 Doak, M. S. *W. Virginia Med. J.*, 23, 253, 1927.
- 12 Wood, R. B., Yarberry, O. H., Letterer, W. *J. Tennessee M. A.*, 20, 55, 1927.
- 13 Fiske, E. H. *Long Island M. J.*, 22, 162, 1928.
- 14 Skoog, A. L. *J. Kansas M. Soc.*, 28, 151, 1928.
- 15 Rice, T. B. *J. A. M. A.*, 91, 1631, 1928.
- 16 Donald, W. *J. Mich. M. Soc.*, 28, 230, 1929.
- 17 Redd, I. K. *Virginia M. Monthly*, 56, 388, 1929.
- 18 Breed, W. B. *New England M. J.*, 202, 151, 1930.
- 19 Smith, J., and Murphy, J. F. *New England M. J.*, 202, 153, 1930.
- 20 Webb, C. C. *J. Florida M. A.*, 16, 401, 1930.
- 21 Cleghorn, G. F. *NEW YORK STATE JOURNAL OF MEDICINE*, 31, 1509, 1931.
- 22 Robertson, D. S. *Kentucky M. J.*, 31, 33, 1933.
- 23 Reisman, D., Fox, W. W., Alpers, B. J., and Cooper, D. A. *Arch. Int. Med.*, 51, 643, 1933.
- 24 Hodges, F. C. *West Virginia M. J.*, 30, 106, 1934.

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EDITORIALS

Health Insurance at Its Worst

At its best compulsory health insurance is an undesirable expedient that places a heavy economic burden upon the working classes in return for second rate medical care. At its worst it is a vicious political device that lowers wages to support an intricate bureaucracy and suffocates medical initiative beneath a mass of red tape. The Byrne bill (Sen. Int. No. 474) is a bad sample of this type of legislation. Even those who believe in obligatory prepayment for illness must find much in it to criticize.

In every nation where sickness insurance has been tried, in every country where it has been studied, there is agreement on the need to deal separately with cash and medical relief. The Byrne Act combines these benefits in defiance of all experience and precept. Ignoring actual needs and the precarious financial condition of government and industry, it sets the upper limit of wage eligibility at sixty dollars a week, draining business and the taxpayer to provide medical service for thousands who are well able to provide for themselves.

The administrative set-up described in the Byrne bill should open the eyes of those who believe that compulsory health

insurance would lower the costs of medical care. At the top is the Health Insurance Board, consisting of a ten-thousand-dollar-a-year Director and three other members, each of whom would receive an annual salary of seventy-five hundred dollars plus traveling costs and incidental outlays. A State General Advisory Council of twelve and a State Medical Advisory Council of nine would also be permitted expense accounts. In an unspecified number of districts, offices would be set up, each headed by a full-time finance and a full-time medical supervisor. These districts would be subdivided into local areas, each with its own full-time finance and medical managers. Aiding the local offices would be local councils, the members thereof receiving per diem fees in addition to traveling expenses. These councils, in turn, would be assisted by an unlimited number of local advisory committees, also entitled to draw incidental costs. For this involved bureaucracy (and only a meager skeleton has been sketched), the worker would pay in periodic deductions from his pay, in lowered wages and augmented living costs and in increased taxation.

Senator Byrne, who is very specific in other respects, fails to state what the doctor's compensation would be under his proposal. Local areas are left free to choose among flat salaries, a per capita system of payment and the fee-per-treatment method—but the question of amounts is left in darkness.

In view of the fact that the Federal government, after months of study, has seen fit to eschew the dubious benefits of compulsory health insurance, there is little warrant for the state to rush precipitately into this controversial system. The Byrne bill is especially obnoxious since it embodies features that are condemned even by the proponents of obligatory pre-payment. It is not enough to beat this act; it must be beaten so crushingly that it will not raise its head again. The profession should rally all of its forces to defeat a measure that would lower the American standard of living, substitute quantity for quality in medical care and make the physician the ill-paid underling of an oppressive bureaucracy.

Invoking the Bogeyman

In New York City, there exists an organization called the Association of Private Hospitals, Inc. This association was organized originally to improve conditions in the private hospitals, and serve the interests of their loosely affiliated staffs. They publish an official organ.

We should welcome their laudable endeavor when they confine themselves to their natural objectives. When they go afield however, and circularize many of the States' physicians with an editorial, entitled "Medical Profession Endangered by Proposed Vicious Legislation," we cannot let the factual inaccuracies go unnoticed. On the other hand, we need not take them too seriously.

The spectres conjured up by the *New York Physician* in its January issue will not terrify those who pause to think before they flee. The bill which has produced such violent editorial jitters in our contemporary restores the free choice of physician to the injured employee. To prevent abuses which might militate against this provision, the profession is asked to assume responsibility for the competence and integrity of its members. Any qualified practitioner may have his name placed on the approved panel to be drawn up by the county societies, provided that he agrees to limit himself to the fields for which he is trained. An otologist, for example, would not be authorized to treat genito-urinary disturbances. Neither would an obstetrician be accepted for lung surgery. Such restrictions are entirely reasonable and do not threaten the professional liberty of the well-intentioned physician in any way.

As the statutes now stand, a medical man cannot treat an industrial injury with any hope of being paid under the Workmen's Compensation Law unless he has received specific authorization from the employer or (in the majority of cases) the insurance company. Through the persistent efforts of the State and County medical societies (the bogeymen of *The New York Physician's* editorial), the principle of free choice has begun to receive favorable consideration.

The Legislature and Labor Department

insist, however, on some guarantee of medical competence in this type of case. While the State and County societies may not represent the entire profession, they unquestionably represent the greater part of it. Certainly there is no other body that speaks more authoritatively for the mass of physicians; and the State does no more than recognize an existing fact when it places upon organized medicine the duty of drawing up a panel of doctors for industrial cases.

Any talk of sinister attempts to give the State and County medical societies autocratic control over the profession, with power to disenfranchise practitioners whose looks or personality do not please, is absurd. The officers of these organizations are elected annually by the members. There is no permanent hierarchy that stands to benefit from the responsibilities which the State seeks to impose on organized medicine.

The profession must face the fact that the State will not consent to the free choice of physicians in workmen's compensation cases unless some responsible medical organization serves as guarantor of the honesty and ability of practitioners working in this field. If it does not consent to some form of self-regulation, the alternatives will probably be State control or a continuance of present conditions under which the carriers call the tune. Instead of invoking fantastic bogeymen, minority medical groups should weigh the real dangers that threaten their professional rights.

Sterilization as a Eugenic Method

In the course of a series of lectures delivered in Bremen on "The Prevention of Useless Lives" and reported by the Berlin correspondent of the *Journal of the American Medical Association* one by F. K. Walter¹ is of particularly timely interest. Walter points out some of the difficulties inherent in applying the Mendelian laws to human breeding. Coming, as this lecture does, from a country where opinion on these topics is exceedingly biased, one may repeat what Johnson said of the dog that walked on its hind legs. "The wonder

¹ Berlin Letter. *J. A.M.A.* 104: 412, 1935.

lies not that he does it well, because he doesn't, but that he attempts it at all." The problem is really vastly more complex than would appear from the reported account of Walter's lecture.

Recent research in England (Hurst)² shows that all forms of mental deficiency are recessive to normal intelligence (in other words they may appear in offspring of normal parents). In 93 subnormal families, 103 mentally deficient parents produced 338 offspring, of whom 110 were mentally deficient. In the normal families, 626 normal parents produced 1,032 offspring, of whom 86 were mentally deficient. If the German law had been applied and all mental defectives sterilized, 110 mentally deficient persons would have been spared the community of 1,370 persons. Eighty-six mentally defective persons, the offspring of normal parents, would, however, continue to grace the populace. The birth of 228 normal persons would have been prevented; of whom 78 were distinctly supernormal, and some of whom reached definitely into the borders of authentic genius.

All criteria for sterilization seem to fall down on rigid inspection. Some of those proposed by the present German law do not become apparent till an age is reached when people have long married and had their families. Even if we take the one which often becomes apparent in childhood, epilepsy, we must admit that half the cases are not truly hereditary. Those cases which are definitely hereditary can in no manner be prevented, because epilepsy is recessive and, as time goes on, the rate at which it disappears becomes slower and slower because the laws of chance operate to lessen the possibility of the meeting of the genes.

In a community without selective mating in which 1 per cent of the population was affected with a simple recessive degenerative condition such as epilepsy, and provided all these individuals were sterilized, it would require four generations to reduce the incidence to 0.5 per cent; seven generations to 0.25 per cent. If the disease

occurred with a frequency of 1 pro mil, it would take 13 generations to reduce the incidence to half of the original value. Hence were measures similar in nature to those proposed by the present German government put in force by Charlemagne, the chances of the birth of the "mental defective" epileptic Napoleon would scarcely have been halved.

Serological Diagnosis of Brain Tumor

It is a mathematical truism that we must have as many equations as we have unknown quantities if we are to get any fixed value for the unknowns. If in the course of a scientific investigation it becomes necessary to fix the conditions of our variables, it is very advantageous to borrow the technic of another science, which by an indirect method will give us the missing equation. This is beautifully illustrated in the astronomical data furnished by investigation of the chemical nature of the atmospheres surrounding the various planets.

In clinical medicine, where we are dealing with so many variables, the methods of all sciences must be adapted to furnish exact data. The investigations of Reicher¹ on the serological characteristics of various tissues affords a striking example. Uhlenluth first found organ specific cell elements in the lens of the eye. Attempts to obtain antisera from other organs have been futile up to very recently. With finer technic, based on the known differences in embryological origin of the various parts of the brain, Reicher was able to distinguish between the anterior and posterior parts of the hypophysis by the use of specific antisera. By preparatory treatment of a rabbit with posterior lobe substance, specific antisera were formed which reacted with posterior lobe or brain extracts but never with anterior lobe. He was finally able to prepare extracts which reacted with posterior lobe substance, and produced scarcely any with brain substance. This confirmed the previously postulated theory of the ontogenetic double

² Hurst, C. C., International Congress of Anthropological and Ethnological Sciences, London, 1935.

¹ Reicher, H., *Zeit. f. Immunitätsforsch.* 80: 85, 1933.

origin of the hypophysis. He was then able to show that the medulla and cortex of the adrenal gland similarly could be differentiated.

The strong reactive power of organ specific brain antisera with an alcoholic adrenal medulla extract showed a biological affiliation with the nervous system. Carrying the idea still further, it was shown that an infiltrating neoplasm of the brain, a glioma, could be demonstrated by a serological reaction. By preparatory treatment of a rabbit with cooked tumor tissue, antisera are formed which, in properly chosen dilution, react with homologous tissue extracts without reacting on the tissue of the same brain or on the control extracts. The development of this principle with further refinements of technique must certainly, in the near future, be of inestimable value in the diagnosis of various tumor growths.

Newer Concepts of Shock

Based upon careful experimental observation Parsons and Phemister¹ present an excellent physiological explanation of surgical shock which remains unresponsive to either infusion or transfusion of blood. By maintaining the blood pressure at a low ebb for several hours in dogs, these observers were able to show that in spite of all subsequent treatments the animals failed to survive because of irreparable damage to the tissues from the sustained low blood tension. Postmortem examination revealed capillary congestion, hemorrhage and moderate necrosis of some of the tissues. Additional findings were free blood in the lumen of the intestinal tract and increased concentration of the blood cells.

Within the last few years the conception heretofore held of the pathogenesis of shock has undergone revision and change.² Certainly considerable discredit is thrown upon the influence of "a histamine substance," as an integral etiological factor in

shock. Blalock³ has shown, for example, that traumatic injury of large masses of muscles of an extremity results in a dilatation of the small blood vessels of the tissues. It is the local diapedesis, loss of fluid and blood plasma at the site of injury which is responsible for shock.⁴ The difference in weight of the traumatized extremity as compared to the normal one, points to the loss of fluids into the tissues as the direct cause of the decreased circulatory volume. Obviously, such a combination of circumstances will produce a concentrated blood. On the other hand, if shock is produced by acute blood loss, there is a dilution of the plasma since fluids must enter from the tissues in an endeavor to maintain the blood volume.

This newer concept of traumatic shock bears out many empirical observations. The efficiency of adequate splintage of a traumatized extremity so as to minimize capillary dilatation, the necessity for increasing the circulating blood volume are comprehended. The futility of employing temporary vasoconstrictors becomes apparent. In reality they decrease rather than increase the blood supply to the organs.

The effects of sustained hypotension associated with shock have been substantiated by clinical observations. Beard, Wilson and Weinstein have shown that when shock has existed for many hours infusion of salt and of glucose are practically valueless,⁵ for not only is there loss of the greater part of the fluid administered, but there is also observed a depletion of the protein content of the plasma when whole blood is injected. On the other hand, there is no decrease in the protein content of the blood because protein has been injected. In protracted shock all measures fail. Therapy resolves itself into early recognition, blood transfusions, warmth and proper splintage of the traumatized tissues.

³ Blalock, Acute Circulatory Failure. *Surg., Gyn. and Obs.* March 1934.

⁴ Beard and Blalock. Experimental Shock—Composition of fluid that escapes from blood stream after mild trauma to the extremity. *Arch. Surg.* 22: 617, 1931.

⁵ Beard, Wilson, and Weinstein. Shock. *Journal of Clin. Investigation* 12: 249, 267, 311, 1932.

¹ Parsons and Phemister. Hemorrhage and shock in traumatized limbs. An experimental study. *Surg., Gyn. and Obs.* 51: 196, 1930.

² Roome, Keith, and Phemister. Experimental Shock. *Surg., Gyn. and Obs.* 51: 161, 1933.

Society Activities

Committee on Legislation

BULLETIN NO. 4, FEBRUARY 4, 1935

The following bills have been introduced since the issuance of our last bulletin:

Senate Int. 447, Feinberg; Assembly Int. 578, Heck, amends the Workmen's Compensation Law so as to create an insolvent carriers fund. Referred to the Labor Committee in the Senate and the Ways and Means Committee in the Assembly.

This is an attempt to produce a substitute for bills Senate Int. 18 and Assembly Int. 18. The principal argument advanced at the hearing by the proponents of the State Fund bill was that bankruptcy of certain companies had left many injured workmen without deserved compensation. Mr. Feinberg suggests that commercial companies create a guarantee fund to prevent a repetition of such default.

Senate Int. 474, Byrne; Assembly Int. 718, Byrnes, enacts the Health Insurance Law, for establishment and administration of a system of health insurance, employer to pay into fund amounts ranging from $3\frac{1}{2}$ to $1\frac{1}{2}$ per cent of total wages, based on weekly wage rate, employee to pay from 1 to 3 per cent of his wages according to weekly rate, and State to pay $1\frac{1}{2}$ per cent of total of wages paid by employers, and appropriating \$100,000. Referred to the Insurance Committee in the Senate and the Ways and Means Committee in the Assembly.

[This bill is the subject of an editorial in this issue.]

Senate Int. 492, Schwartzwald, amends the Public Health Law relative to general powers and duties of local health boards and to treatment required for venereal diseases in certain cases. Referred to the Health Committee.

Deletes from the law requirements regarding the manner in which boards of health of local communities shall provide treatment and substitutes, instead, that this treatment shall be provided in accordance with rules and regulations of the sanitary code.

Senate Int. 505, Kleinfeld, adds new section to the Mental Hygiene Law for certification of qualified psychiatrists by a board of examiners in Mental Hygiene Department. Referred to the Health Committee.

Senate Int. 506, Kleinfeld, amends the Criminal Code for appointment by court of commission of three persons, one to be an attorney, one a qualified psychiatrist, to determine sanity of defendant or for commitment of defendant to a public hospital for

observation, and making other changes. Referred to the Codes Committee.

These are the two bills which we have followed for several years, which would create a board of qualified psychiatrists for assistance to the courts in determining the mental status of defendants, and providing for the use of such board. We have approved this set-up in past years and the conference the other day voted its approval of the present bills.

ACTION ON BILLS

Assembly Int. 321, Doyle, relative to withdrawal of a city from a county health district, etc., has reached third reading.

HEARINGS

Feb. 20 — Assem. 558	{ Sullivan, working hours of nurses in public hospitals; hearing before Assembly Committee on Labor and Industry.
Feb. 26 — Assem. 202	{ Farenga, applicants for civil service examinations; hearing before Assembly Committee on Judiciary.

CONFERENCE OF COUNTY LEGISLATIVE COMMITTEE CHAIRMEN

The conference of county chairmen held in Albany on Thursday, January 31, was without doubt the most successful conference we have had in recent years. The following thirty-three County Societies were represented: Albany, Allegany, Bronx, Broome, Cayuga, Chautauqua, Clinton, Columbia, Cortland, Delaware, Erie, Essex, Genesee, Greene, Jefferson, Kings, Madison, Monroe, Nassau, New York, Ontario, Orange, Otsego, Queens, Rensselaer, Richmond, Schenectady, Steuben, Suffolk, Tompkins, Ulster, Warren, and Westchester. There were also present all of the members of the State Legislative Committee and the following guests: Drs. Arthur J. Bedell, President of the State Society; Peter Irving, James N. Vander Veer, Frederic C. Conway, John J. Morton, R. P. Harris, Charles A. Earl, A. J. Hambrook, Jacob L. Moreno, Mr. Dwight Anderson, and Mr. J. Louis Neff.

The conference convened at ten o'clock. Dr. Aranow announced that the order of business would be to review the bills that had already been introduced, and asked Dr. Lawrence to lead in the review. Bills 18, 19, and 20 received considerable discussion. Unanimity in opposing 18 and 20 as drafted was immediately expressed, and unanimous approval of No. 19 was voted. Special pains were taken to discuss the provisions of No. 19 in order that every member of the conference might be particularly conversant with what the law will be if the bill is enacted. The representatives of several County Societies reported that their Societies had taken adverse action on the bill because of certain features, and principal among these was the responsibility that would be placed upon the County Societies. The argument was advanced that the County Societies are not sufficiently organized to administer the responsibility that would be placed upon them and that some provisions of the bill would favor political interference with the treatment of compensation cases. These were widely discussed and effectively answered.

Dr. Aranow encouraged the discussion with the hope that the conference could take unanimous action; he deplored the fact that one or two County Societies had taken their opposition to their legislators without regard to what the action of the majority of the County Societies might be. He appealed to the representatives that if ever there was a time when organized medicine needed to act as a unit, it is now, and that the wish of the majority should become the will of the Society; that those who are endeavoring to overthrow our present system of the practice of medicine are doing their utmost to divide our organization into small independent units.

Dr. Bedell was present during the entire conference and announced that the Committee on Trends had developed a program of publicity through which the State Society expects to assist the County Societies in informing the public on organized medicine's views with regard to the many propositions for socialized medicine which are appearing daily. At the close of the conference Dr. Rooney, a member of the Committee on Legislation and also chairman of the Committee on Trends, introduced Mr. Dwight Anderson as the director of the new publicity program. Mr. Anderson announced that he had with him Dr. Moreno, who had practiced for a number of years under the health insurance act of Austria. Dr. Moreno gave the conference a very graphic description of the ill effects of health insurance upon the public and the profession.

Action taken by the conference on the bills follows:

APPROVED

- Senate Int. 19—medical abuses bill
- Senate Int. 77—civil service examinations
- Senate Int. 123—carrier's physician, examination
- Senate Int. 154—reports of communicable diseases
- Senate Int. 208—lien bill
- Senate Int. 270—employment of dentists and health nurses
- Senate Int. 300—bovine animals infected with Bangs disease
- Senate Int. 312 and Senate Int. 314—blood-grouping tests
- Senate Int. 315—supervision of clinical laboratories
- Senate Int. 357—sale of lye and other caustic substances. (Dr. Bedell, speaking as a member of the Academy of Ophthalmology and Otolaryngology, urged that this bill be approved.)
- Senate Int. 365—civil service examinations
- Senate Int. 401—sale of drugs, etc., for prevention of venereal diseases
- Senate Int. 409—parking space in front of physician's residence
- Assembly Int. 321—withdrawal of city from county health district
- Assembly Int. 371—lien law (physicians only)
- Assembly Int. 372—members of Public Health Council
- Assembly Int. 461—clinical laboratories (including x-ray)
- Senate Int. 505—certification of qualified psychiatrists
- Senate Int. 506—examination of defendant to determine mental condition
- Senate Int. 514—hospital care of sick and disabled persons
- Assembly Int. 656—recovery for cost of relief

DISAPPROVED

- Senate Int. 18—State Fund, insurance
- Senate Int. 20—blanket occupational disease bill
- Senate Int. 302—health commissioner, bequests, hospitals
- Senate Int. 474—health insurance
- Assembly Int. 559—public welfare districts, free medical care

NO ACTION

- Senate Int. 1—unemployment insurance fund
- Senate Int. 44—free milk for undernourished children, etc.
- Senate Int. 45—county government, reorganization
- Senate Int. 60—county government, reorganization
- Senate Int. 67—old age relief
- Senate Int. 98—unemployment reserve fund

Senate Int. 118—car-fares and eyeglasses for indigent children
 Senate Int. 203—investigation of illegal practice of professions
 Senate Int. 246—TERA, transferring to Social Welfare Department
 Senate Int. 271—protection of water supplies
 Senate Int. 447—insolvent carriers' fund
 Senate Int. 513—debts, moratorium
 Assembly Int. 59—old age relief
 Assembly Int. 344—old age relief
 Assembly Int. 452—old age relief

Assembly Int. 558—working hours nurses, public hospitals
 Assembly Int. 644—workmen's compensation, silicosis, etc. (Approved in principle, but action deferred until later bill is introduced.)

HARRY ARANOW
 B. B. BERKOWITZ
 B. WALLACE HAMILTON
 JAMES F. ROONEY
 LEO F. SIMPSON
Committee on Legislation

Medical Broadcasts

Scheduled under the auspices of the Medical Information Bureau of the New York Academy of Medicine and the Medical Society of the County of New York from Station WABC, Columbia Broadcasting System:

Thursday, February 21, at 11:15 A.M., 15 minutes.

Subject: "The Old Family Doctor."
 Speaker: Dr. William F. Snow, General Director, American Social Hygiene Association.

Thursday, February 28, at 11:15 A.M., 15 minutes.
 Subject: "Face Maternity Well Informed."
 Speaker: Dr. George W. Kosmak, Secretary of the Obstetric Advisory Council, New York City Department of Health.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

The New York Society of A.M.A. Approved Roentgenologists

January 23, 1935

To the Editor:

Those radiologists of the Greater Metropolitan District of New York who have been recognized as specialists by the American Medical Association, have formed a society known as the New York Society of A.M.A. Approved Roentgenologists.

The objectives of this Society are: (1) To promote a more cordial relationship between the radiologists and the other members of the medical profession, and to aid in the better understanding of each other's problems.

(2) To arouse among physicians that sense of professional ethics and loyalty, which apparently has been completely forgotten or lies dormant in many quarters, as evidenced by the fact that lay-owned and lay-controlled so-called "x-ray laboratories" continue to exist and flourish, while many well trained and ethical roentgenologists find themselves in great economic difficulty.

(3) To fight the evil of lay encroachment upon the practice of medicine. The ease with which laymen and lay corporations, although not licensed to practice medicine, manage to find ways of worming their way into the practice of medicine is a very serious problem which should be the concern not only of the radiologist but of all the other members of the medical profession. Lay organizations

are daily making deeper inroads into the practice of medicine, and the end is not in sight.

The New York Society of A.M.A. Approved Roentgenologists welcomes the moral support of the entire medical profession. It is evident, however, that the success of our efforts is dependent upon the active support of the entire radiologic body of the State. In the Greater Metropolitan District of New York, 97 per cent of the A.M.A. approved roentgenologists have already become members of the Society. Encouraged by the great local interest in the activities of the Society, the constitution of the Society was recently amended to enable all of the A.M.A. approved radiologists of the State of New York to become members.

The New York Society of A.M.A. Approved Roentgenologists wishes to take this opportunity of earnestly requesting all of the approved radiologists of the State of New York to apply for membership in the Society. Application should be sent to Dr. J. J. Master-son, 401 76th Street, Brooklyn, Chairman of the Membership Committee.

S. FINEMAN, M.D., *Chairman*
 W. H. BOONE, M.D.
 DAVID E. ERLICH, M.D.
 REDFORD K. JOHNSON, M.D.
 E. F. MERRILL, M.D.

Committee on Education

Current Comment

Income Tax Deductions for Professional Expenses

A professional man, in estimating the amount of income tax he is to pay, may deduct all necessary expenses incurred in the pursuit of his profession. These include the cost of supplies used in his practice, office rent, cost of light, water, fuel, and telephone in his office, the hire of office assistants, and expenses paid in the operation and repair of an automobile, based upon the proportion of time it is used in making professional calls or for other professional purposes.

Many physicians use their residences both as their offices and their homes. In such instance the physician may deduct as a business expense the rental value of the rooms occupied for office purposes if he actually pays rent, and also the cost of light and heat furnished these rooms. Also, he may deduct a portion of the wages paid domestic servants whose time is partly occupied in caring for these rooms. Membership dues in professional societies are deductible. Physicians and dentists who keep in their waiting rooms current magazines and newspapers for the benefit of their patients may deduct this item as a business expense. The cost of professional journals for the taxpayer's own use is also a deductible item.

The cost of technical books is not a deductible item, being a capital expenditure, but a proportionate amount for each year's depreciation of the books may be deducted. Depreciation may also be taken on office furniture and equipment. Insurance premiums on office or other professional equipment and liability insurance may be deducted. Automobile liability insurance may be deducted only when the automobile is used wholly in pursuit of the taxpayer's profession, and the cost of the entire upkeep may legitimately be claimed as a professional expense.

Girls' School Head Flays Health Insurance

Dr Jacob L. Moreno, Director of Research, New York State Training School for Girls at Hudson, New York, did a service on January 31 at the meeting of the Legislative Committee when he stigmatized the health insurance bill pending before the State Legislature as a measure under which patients would get poor medical care and physicians would degenerate into callous machines. Health Insurance cheats both the patient and the doctor. In the name of trying to advance

human welfare, such measures actually retard progress.

Dr. Moreno said, "I know from experience with actual reality that no matter how rosy the picture of ideal care for the poor that is presented by such schemes for health insurance in practice they do not work. They cannot work, because they fail to take account of factors in human relations which are indispensable to the practice of the healing art.

"No physician," added Dr. Moreno, "is capable of properly treating the large number of patients sent him under health insurance. So he is forced to evolve some mass production plan of operating his office to run people through his mill as fast as possible. A quick look, a stock prescription, a pat on the back, and out the door.

"The 'rush' system of handling patients is inevitable. When the technique of getting them in and out fast enough is perfected the doctor begins to lose that intangible 'something' which is vital to both himself and his patient—his morale. I do not know any doctor who remained long at this sort of practice in Austria who did not become hardened. A doctor's personal interest in his patient is essential. The response he makes emotionally to the trust reposed in him is important. If the patient comes to the doctor because of confidence in him and not merely because he is an insurance doctor, interest and insight are quickened. Mutual free choice is basic to good medical care.

Every person's capacity to expand emotionally, and to sustain a confidential relationship is limited. A physician may be able to maintain a keen mental activity while examining a few cases a day, but after his limit is reached the power to sustain the faculties on a high plane wanes until finally, when the last case of a long line is reached, the patient becomes merely a serial number on a piece of paper. Health insurance forces on the doctor an utterly impossible human task—to sustain a genuine personal interest in all the individuals of a miscellaneous crowd at his door.

"The insurance doctor does the best he can, but patients suspect they would get better attention if they came to him during his private office hours when he could give them more time. This is a distinct and definite injury to the character of the physician. He must hurry through his insurance patients so that he can have plenty of his best self left to take care of his private patients. This is a corrupting influence. He knows he has not lived up to the highest

tenets of his profession to give his best to every patient who comes to him. He has been forced by circumstances enacted by a law to do less than his best by some of his patients, and even his best with the few who see him privately gradually becomes not so good as it once was.

"Nobody who has not seen such schemes in practice as I have can realize how odious they are. They destroy everything that makes the healing art effective. A new face comes between the doctor and the patient, that of an inspector or supervising physician, or an insurance bureau bookkeeper, questioning on this and on that particular without the intimate understanding derived from having seen and known the patient. At best, the real patient, the one for whom the mass-production doctor is working, whom he must please if he is to live, is not the sick man, but an adding machine in the office of a bureaucrat who pays the fees out of an insurance fund. This man doesn't care whether the patient lives or dies, only how much he costs the fund. And his influence is exerted only in the direction of economy and other externals.

"Supervisors are needed in health insurance organizations. A controller or supervisor who brings in many complaints against doctors is a good supervisor—he is headed for promotion because medical practice has now become a business instead of a profession. Thus do we destroy a truly healing relationship of which trust and confidence is the basis, and substitute a chain-store, cut-rate imitation, which corrodes curative values needed to heal the sick.

"The system which we now have in the United States is not perfect. But I know from personal experience that the conditions imposed by health insurance are far worse. Health insurance is a type of socialized medicine. It is impossible to socialize the doctor unless the business man, the banker, and the lawyer are socialized, too. Until the time comes, if it ever does come, when we have communism or some form of collectivism, health insurance simply will not work. Though it applies only to the lower income groups, those groups will always feel they are getting less than they ought to get, even if the doctors are men of quality having lucrative private practices in addition to their insurance patients. Like all halfway measures, it will fail, despite the well-meaning altruism of those who sponsor such legislation. They do not realize, as the physician does who has practiced under such a system, how destructive it is to quality in medical care.

"Letters which have come to me recently from former patients in Austria state that conditions are no better now than when I

left five years ago, but are worse, if anything."

Compensation for Court Testimony

The Westchester Medical Bulletin for February makes the worth-while suggestion that physicians, when called upon to testify in a case in which they knew before appearing that their testimony will be of an expert nature, to make a practice of asking reasonable compensation for such services before they appear in court.

Lauds Organized Medicine

The Milwaukee Tissue says: "We wish to remind skeptics that no matter what difficulties they labor under at the present they would be infinitely worse were it not for organized medicine."

Physicians' Trade Union in Germany

The American Medical Association Bulletin for January, 1935, commenting on the one hand on the action of 6,000 physician members joining a Trade Union, and on the other hand upon harsh restrictive regulations in Germany including a prohibition to German physicians to send patients to the Marienhospital in Düsseldorf, asks: "What does it signify? The movement for the socialization of medicine has progressed far in England and farther in Germany. Can it be that the affiliation of several thousand physicians with a trade union in one country and the subjection of insurance physicians to harsh, dictatorial decrees in another country are developments that naturally attend on the establishment and operation of a system of socialized medicine?"

Low Wages a Peril

"Social insurance is always a result of low wages. Adequate wages would immediately shift the responsibility of meeting such emergencies from society to individuals."—(from Simons and Sinai, in *The Way of Health Insurance*, Chicago University Press.)

A.M.A. Circularizes Abstract of Sickness Insurance Bill

The American Medical Association has sent an abstract of a bill for sickness insurance prepared by the American Association for Social Security, or its secretary Abraham Epstein, to the constituent parts of the American Medical Association. The January issue of the *American Medical Association Bulletin* contains a revised draft. Get it, read it—and ponder!

Society Insurance Information Available

Some of our County Societies are interested in knowing more about Malpractice Defense Insurance. They are interested from various angles. Some would like to see open bids for the group insurance of the State Society. The following are factual statements. The arrangements with the Aetna Life Insurance Company can be terminated at any anniversary date. The State Society has an insurance representative who could turn to other reputable and reliable companies who might take over the group policy of our membership. Before taking up with any new insurer, it must be established that the latter could and would compare favorably with the present carrier in solvency, action, and continuity.

The group insurance plan has been operated for thirteen years and a vast amount of detailed information is at hand. Costs can be computed. They consist mainly of cost in insurance rates, operating cost or expense ratio, and the loss ratio. The latter would be the same for any company writing the Society's business, and the former is found to be lower than that charged "to any kind of insurance by any stock company in the State."

County Societies which are really interested in this question could dispel much misinformation and misunderstanding, if they will assist their members to obtain definite information. Mr. Wanvig, our insurance representative, has a quantity of lantern slides and is a qualified expert on the topic. Why not let him address the members? Likewise why should not the members ask him questions to clarify the situation? Why not?

Exhibits Are Education

Exhibits at the annual meeting are always interesting. If the work of the Committee on Scientific Work, and the committee on its exhibit bear fruit, the scientific exhibit will be better than ever. This is but another form of graduate education for the physician.

Milbank Is Learning

Mr. Milbank, head of the Foundation of that name, held forth to the secretaries of the County societies of the Medical Society of Indiana recently. He said nothing new. He still thinks compulsory insurance is a good thing, but he now concedes that the doctor is the essential factor in the success of any health scheme! There is something gained anyway! He and his employees are not in total accord as regards methods of procedure. Mr. Milbank's education is proceeding, however. He will sooner or later learn that organized medicine is the only group which

can speak authoritatively for the profession and to it he should turn for advice and counsel in working out schemes for the improvement of medical care for the whole people. That is, if that is necessary!

Holds Cost of Hospitalization Is Excessive

Although fewer than 10 per cent of the population are cared for in hospitals in any one year, hospitalized illnesses are so expensive that they consume 50 per cent of the total annual expenditure for all medical care. William Alan Richardson, writing in the January issue of *Medical Economics*, thus explains the growing interest in group provision for hospitalization. "In spite of much loose talk about the high cost of doctoring in the peak year of 1929," says he, "only 29.8 cents out of each dollar spent for individual or public health in the United States went to the private practitioner."

More About Health Insurance

A German labor economist "offers new plan to avoid pitfalls of old one" (the subtitle of his pamphlet). Gustav Hartz asks: "Will America copy Germany's mistakes?" This is a publication of the Pennsylvania Self-Insurers' Association. This booklet should be very carefully studied by the proponents of health insurance. The rest of us suspected long ago what here is set forth! It makes good reading. Get the book. It is worth perusal.

Dr. Frederic E. Elliot, chairman of the Committee on Economics, says: "The American people will be talked into health insurance if every physician does not do his part. He must first become informed, then talk to his own people." Hartz's little booklet will help inform you and give you something to talk about.

Perhaps a United Front

The metropolitan area whose District Branches comprise both the first and second have appointed their conference and study group in accordance with the Council's recommendation. Perhaps a united front will emerge.

Sick Benefits in Germany

How the juggernaut grows is shown by the developments in Germany. In 1913 the German system provided benefits for 134,000,000 days of sickness. In 1928 this figure reached 290,000,000. In 1914 the gross income of various sick funds was 670,000,000 marks (1 mark = about 25 cents). In 1928 this figure had reached 2,100,000,000 marks.

County Societies

Albany County

Mrs. H. P. Mencken, of the Woman's Auxiliary to the Medical Society of the County of Queens, the first one organized in New York State, recently helped organize an Auxiliary to the Albany County Medical Society. She was accompanied by Mrs. Thomas D'Angelo, president of the Queens Auxiliary.

A luncheon was given for them at the De-Witt Clinton Hotel in Albany and was attended by the wives of the officers of the Albany Medical Society.

The organization meeting was held in the Auditorium of the Harmanus Bleecker Library and was attended by fifty doctors' wives. The speakers were: Dr. Arthur Bedell, president of the New York State Medical Society; Dr. Walter A. Reynolds, president of the Albany County Medical Society; and Dr. Joseph Lawrence, secretary to the New York State Medical Society.

Mrs. Mencken addressed the women on the Objects and Reasons for an Auxiliary. Mrs. D'Angelo related the history of the Queens Auxiliary and some of its achievements.

The Albany County Auxiliary was officially organized and officers were elected, as follows: Mrs. Lawrence of Albany, president; Mrs. William P. Howard, vice-president; Mrs. Frank J. Williams, secretary; and Mrs. William J. Fitzgerald, treasurer.

Bronx County

Dr. William Ainslie Goodall, prominent Bronx physician, died in January at the Wickersham Hospital, after a brief illness. He was 72 years old. His widow, Elizabeth Anderson Goodall; a sister, Janet Carruthers, of Windsor, Canada; and a brother, Auls, of Galt, Canada, survive.

He had been active in local medical work for 50 years. He was the first director of the Morrisania City Hospital, on whose staff he remained until his death as a consulting physician.

On May 6, 1933, more than 400 friends and professional associates honored him on his 50th anniversary as physician with a testimonial dinner in the Hotel Astor. The dinner was sponsored by the medical board and staff of the Morrisania Hospital. Speakers included former Hospital Commissioner J. G. William Greeff, Dr. Charles Gordon Heyd, Dr. Nathan D. Van Etten, and former Justice Tierney.

Dutchess—Putnam Counties

At the annual meeting of the Dutchess-Putnam Medical Society held at the Hudson River State Hospital, Dr. John R. Rose, superintendent of the Wingdale Hospital was elected president to succeed Dr. W. W. Thompson, of Poughkeepsie.

Two new members, Dr. Edward W. Briggs of the Harlem Valley State Hospital and Dr. Viola G. Hudhart of the Hudson River State Hospital, were elected to membership.

Other officers chosen were Dr. C. O. Davison, vice-president; Dr. Howard P. Carpenter, secretary-treasurer; Dr. John F. Rogers, associate secretary; Dr. C. Knight Deyo, delegate to the State Society; Dr. A. L. Peckham, Dr. James Toomey, and Dr. G. J. Jennings, censors; George V. L. Spratt, counsel—all of Poughkeepsie.

A paper on "Mental Hygiene and the General Practitioner," with a demonstration of cases, was read by Dr. Solon C. Wolf of the Hudson River State Hospital staff.

Erie County

The Erie County Medical Society, on January 21, following the inaugural address of its new president, Dr. Herbert H. Bauckus, who stressed the importance of providing every sick person with the individual service rendered by the private physician, unanimously approved a resolution to have the city adopt a plan similar to that used in the counties of the State under which needy persons requiring medical care would be referred to private physicians who shall be compensated by the department of social welfare at the rate of \$1 per office call, \$2 per home call, and \$25 per birth case.

This proposal is to be pushed by members of the society among the various civic organizations of the city in an effort to have the City Council adopt it.

Genesee County

Dr. Joseph P. Garen of Olean gave an address on Economic Problems at a meeting of the Genesee County Medical Society on January 22 in Batavia at the Hotel Richmond. He is a member of the Committee on Economics of the State Society.

Dr. Charles D. Graney of Le Roy, president, has appointed the following committees for the year: Public Health, Dr. H. M. Spoford of Batavia (chairman), Dr. Ralph

Frazier of Bergen, and Dr M P Messinger of Oakfield, medical economics, Dr Stanley R Hare (chairman), Dr Loren B Manchester and Dr Peter J DiNatale, all of Batavia, legislative Dr DiNatale (chairman), Dr Charles M Groney and Dr Robert G Wilson, all of Batavia, program, Dr DiNatale (chairman), Dr Hare, and Dr Charles L Davis of Batavia, membership Dr Ward B Manchester (chairman), Dr Edward N Morgan and Dr Irwin A Cole all of Batavia, physiotherapy, Dr Thomas M Steele, of Le Roy (chairman), Dr Frazier, and Dr R L Warn of Oakfield

Kings County

Dr J Sturdivant Read president of the Medical Society of the County of Kings has issued a statement in behalf of the Brooklyn Visiting Nurse Association in which he emphasizes the obligation that rests upon borough citizens to support the Association's work.

The physicians of Brooklyn both as individual practitioners and as members of the County Medical Society, have reason to know and appreciate the work of the Brooklyn visiting nurses [said Dr Read]. The Medical Society of the County of Kings for the last ten years has been in effect the medical advisory board of the Brooklyn Visiting Nurse Association.

The Association has a record of 46 years service in the borough. During this period the staff has grown from one to 141 every one of whom is a registered graduate nurse equipped to give skilled bedside care in the home. The members of the staff of the Brooklyn Visiting Nurse Association are fulfilling their mission in the individual care they give to the sick in their co-operation with the physicians of Brooklyn and in the general cause of public health. Such a service deserves the wholehearted support of the public.

Monroe County

A rich flow of humor was the chief feature, according to all reports of the testimonial dinner tendered on January 15, by the Rochester Academy of Medicine to Dr George Hoyt Whipple, the Nobel Prize winner.

Dr Milton C Winternutz, retiring dean of the Yale School of Medicine, was selected to deliver the principal address. It resolved itself into series of facetious reminiscences gained through almost a lifetime of association with the guest of honor. Delivered with the humor of a professional after-dinner speaker, they kept the audience in constant laughter.

More than a score of internationally famous men arose to pay their personal respects to the quiet Rochester scientist, but nothing remotely approaching a formal address was heard.

With one or two exceptions, nobody spoke more than five minutes, and hardly a technical or scientific word was heard throughout. Humor featured practically all the talks, though with an undercurrent of earnestness.

When Dr Whipple was called upon to reply, he said "I shall never be able to live up to the pinnacle of excellence attributed to me here, and I don't suppose I shall ever be able to live down this occasion. I expect when we leave here tonight stretcher-bearers will carry out all the mangled, maimed, and bleeding adjectives, treat and restore them and finally put them back into circulation on the golf course outside."

The Medical Milk Commission reports that its chief accomplishment for the past year is the elimination of the distribution of all raw milk in the City of Rochester, except certified. This was accomplished after years of effort and the ordinance was passed by the Common Council last summer although an attempt was made to stop it by the use of an injunction. In all probability it will be a permanent situation in Rochester.

It is the desire of the Medical Milk Commission that all physicians become acquainted with the fact that should they wish to prescribe raw milk, there is available an excellent certified supply which is as safe as it is possible to render raw milk. The price is only 4¢ above the charge for the general milk supply.

The Membership Committee of the County Society says that its real task has not been with the young men. They appreciate the value of affiliation with the County and State Societies with its insurance protection and other activities. But the older men who have allowed their membership to lapse not because of any criticism or dissatisfaction but apparently, entirely because of financial reasons present a problem very difficult of solution.

A member to be stricken from the rolls must be in arrears or owe the Society \$32. The Committee suggests that if some arrangement could be brought about whereby that member could be reinstated if he could pay his indebtedness for the current year or make up the amount in installments it might have greater success in bringing back those who have fallen away.

New York County

Most of the abuses connected with the medical service in workmen's compensation "have grown out of suppression of the free choice of physicians and investment of the insurance carriers and employers with control over treatment," said Dr Franklin Welker in his inaugural address as President of the Medical Society of the County of New

York. "There should be," he holds, "a complete separation of financial relief from medical service, with the medical profession in full control of the latter."

The propaganda for health insurance, he holds, emanates "from the small minority that controls most of the nation's wealth," who wish "to prevent any radical changes in the order which favors them so strongly." He riddles the claims for health insurance by pointing out that "over 47 per cent of the population has no illness in a normal year and 90 per cent of those who fall sick suffer from minor ailments for which they are able to provide with no difficulty. Hence, to safeguard 10 per cent of the population, 90 per cent are to be required to pay a sum that, in many cases, would entail a definite drop in living standards. If the system is to apply to the entire population, as one of the so-called reformers suggests, you will have the ironic spectacle of the 80 per cent who are earning under \$2,000 a year contributing to the sickness expense of people with five or ten times their income."

The best way to provide medical care for those unable to pay, in his view, is some arrangement like the Geib-Vaughn plan, "which has met with such success in Detroit, or the comparable method adopted here in the past few years by Federal and local emergency relief administration. Just as the individual on relief has his rent paid and is given food tickets, he receives an authorization for medical care when ill. He may be treated by any licensed practitioner enrolled for this work and the government pays the bill in accordance with a fixed fee schedule."

Dr. Walter T. Dannreuther, in his address as retiring president, defended the Comitia Minora of the County Society against charges that it is "a self-perpetuating body." "A detailed analysis of this personnel over a period of years refutes this allegation," he asserted.

The New York Physicians' Art Club will hold its 8th Annual Exhibition for two weeks, beginning March 30, at the New York Academy of Medicine, 5th Avenue and 103rd Street. The officers of the Club are Howard Lilienthal, president; W. Morgan Hartshorn, treasurer; Louis C. Schroeder, 50 East 72nd Street, secretary, to whom all communications should be addressed. The members, who pay no dues, but only a fee with their exhibits to pay expenses, are mostly New Yorkers, but any physician is welcome to send in original art works to the showing. Former exhibitions have opened with a dinner of members and guests, and informal talks by artists, critics, and amateurs. These exhibits included oils, water colors, lithographs,

sculpture, photographs, pastels, wood carving, book plates, ship-models, etchings, jewelry, wood-inlays, and book bindings.

Dr. Robert James Carlisle, for 46 years a member of the faculty of New York University and Bellevue Hospital Medical College, died of coronary thrombosis in the hospital, where he was a member of the staff. He is survived by his wife, Mrs. Mary Alice Dominick Carlisle.

Dr. Carlisle, a teacher and consultant in internal medicine, was born in New York City on December 5, 1859. His father, Hugh Carlisle, was a New York teacher, in whose memory Carlisle Public School was dedicated. On his maternal side Dr. Carlisle came from old American stock. The founder of the American Line, Thomas White, came to Massachusetts from England in 1636, 16 years after the *Mayflower* voyage. Many of Thomas White's descendants were physicians and ministers and one, Dr. Oliven White, became a prominent practitioner in New York and was one of the founders as well as vice-president of the New York Academy of Medicine.

Oneida County

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The secretary reported for the year, enumerating the new members elected, the loss of members by death and transfer to other counties, and the speakers of the year, three-fourths of whom were our own members. The treasurer reported a balance on hand with very few delinquents. Dr. T. H. Farrell, chairman of the Public Relations Committee, gave a report of the work done by the Committee during the year, calling attention especially to the survey of maternal deaths and attention called to this matter on the occasion of Mother's Day, the survey of Health Agencies in the city of Utica, and the proposal to use private hospitals for the overflow of the Oneida County Hospital. Later a motion was put through recommending to the Board of Supervisors a minimum fee at which the physician would care for any overflow of patients from the Oneida County Hospital into private hospitals.

For the Committee on Medical Economics, in the absence of Dr. F. M. Miller, chairman, his report was read by Dr. John Gromann. It outlined the activities of the local Committee in connection with the Committee on Medical Economics of the State Society, of which Dr. Miller is a member.

For the Board of Censors, Dr. Roemer read the application for membership of Dr. Harry B. Luke of Marcy State Hospital, Dr. Paul Cahn, and Dr. Herman J. Segaul, who were elected.

The scientific program consisted of the retiring president's address in which Dr. Powers reviewed medical practice in its ethics and technic, and pointed out pitfalls that must be guarded against in the near future.

A motion picture film was shown by Mr. R. C. Mill, representative of the Mead-Johnson Company, entitled "The Fertilization of the Human Ovum."

Queens County

The Queens County Auxiliary is making plans for its second anniversary birthday party in March. It was the first auxiliary organized in the State. It is hoped that many other counties will form auxiliaries and finally stimulate the formation of a State Auxiliary. States in which Women's Auxiliaries have been formed have found such an organization of marked benefit to the State Society. They have contributed to the attendance at State Meetings where the women of the local Society have acted as hostesses to the wives and members attending the functions.

The library of the County Society has received a gift of \$200 for the purchase of books. Last year was the best in the history of the society's *Bulletin*. It more than paid its way and only a small amount is still due from advertisers.

The Queensboro Council of Social Agencies is offering citizens of Queens an opportunity to discover and discuss the local slant on health and national problems as they affect Queens in its series of six forums—on January 29; February 5, 19 and 26; March 5 and 12, at Public School No. 20, Sanford Avenue and Union Street, Flushing.

These forums, under the general title of "What Queens Needs" will take up such current and vital topics as "What Queens Needs in a Preventive and Remedial Health Program," "Character Building and Crime Prevention," "Low Cost Housing," "Wide Recreational Programs for Young and Old," "Effective Educational Opportunities for All Children," and "A Program of Adult Education."

A panel of prominent citizens has been

selected by the Queensboro Council of Social Agencies to meet with each speaker before each forum. These meetings will develop the most vital issues and important facts on them, to be brought out at the forums. A different panel has been arranged to precede each forum, thus insuring varied and representative opinions on every topic.

Schenectady County

Dr. Roger Anderson of Seattle, Washington, whose discoveries have changed several medical theories, addressed a large meeting of the Schenectady County Medical Society at Ellis Hospital on January 18.

He explained methods of treating fractures of the lower extremities which he announced two years ago. His lecture was supplemented with moving pictures and lantern slides and was followed by an intensive discussion.

There were present representative groups of physicians and surgeons from Albany, Troy, Amsterdam, Saratoga Springs, Ballston Spa, Gloversville, and several other communities.

Dr. Anderson's treatment entails the placing of a cast on both legs when there is a fracture of a hip or leg. The well leg serves as a leverage for the injured leg and serves to keep both the same length and hastens recovery.

Among the many advantages cited for the new system are: Patients may sit up within a day or two after the fracture has been reduced, there is less shock, they can leave the hospital sooner, and they are more easily handled by their nurses.

Westchester County

The Westchester Comitia Minora has officially endorsed the movement of the County Pharmaceutical Association to issue blank prescription forms to physicians. It feels that every step must be taken to disabuse the public of the notion that certain individual doctors derive commissions from certain pharmacists for prescription business supposedly referred to them.

Wyoming County

The Wyoming County Medical Society held its quarterly meeting at the Castile Sanitarium, Tuesday, January 8. Dinner was served at noon to the doctors and their wives, after which all attended the scientific program in the gymnasium.

Dr. J. W. Gallagher of Perry, president of the Society, opened the meeting and after the routine business discussion, introduced the invited speaker of the day, Dr. Margaret Warwick of the Millard Fillmore Hospital, Buffalo. Her subject was "Benign and Malignant Tumors."

York. "There should be," he holds, "a complete separation of financial relief from medical service, with the medical profession in full control of the latter."

The propaganda for health insurance, he holds, emanates "from the small minority that controls most of the nation's wealth," who wish "to prevent any radical changes in the order which favors them so strongly." He riddles the claims for health insurance by pointing out that "over 47 per cent of the population has no illness in a normal year and 90 per cent of those who fall sick suffer from minor ailments for which they are able to provide with no difficulty. Hence, to safeguard 10 per cent of the population, 90 per cent are to be required to pay a sum that, in many cases, would entail a definite drop in living standards. If the system is to apply to the entire population, as one of the so-called reformers suggests, you will have the ironic spectacle of the 80 per cent who are earning under \$2,000 a year contributing to the sickness expense of people with five or ten times their income."

The best way to provide medical care for those unable to pay, in his view, is some arrangement like the Geib-Vaughn plan, "which has met with such success in Detroit, or the comparable method adopted here in the past few years by Federal and local emergency relief administration. Just as the individual on relief has his rent paid and is given food tickets, he receives an authorization for medical care when ill. He may be treated by any licensed practitioner enrolled for this work and the government pays the bill in accordance with a fixed fee schedule."

Dr. Walter T. Dannreuther, in his address as retiring president, defended the Comitia Minora of the County Society against charges that it is "a self-perpetuating body." "A detailed analysis of this personnel over a period of years refutes this allegation," he asserted.

The New York Physicians' Art Club will hold its 8th Annual Exhibition for two weeks, beginning March 30, at the New York Academy of Medicine, 5th Avenue and 103rd Street. The officers of the Club are Howard Lilienthal, president; W. Morgan Hartshorn, treasurer; Louis C. Schroeder, 50 East 72nd Street, secretary, to whom all communications should be addressed. The members, who pay no dues, but only a fee with their exhibits to pay expenses, are mostly New Yorkers, but any physician is welcome to send in original art works to the showing. Former exhibitions have opened with a dinner of members and guests, and informal talks by artists, critics, and amateurs. These exhibits included oils, water colors, lithographs,

sculpture, photographs, pastels, wood carving, book plates, ship-models, etchings, jewelry, wood-inlays, and book bindings.

Dr. Robert James Carlisle, for 46 years a member of the faculty of New York University and Bellevue Hospital Medical College, died of coronary thrombosis in the hospital, where he was a member of the staff. He is survived by his wife, Mrs. Mary Alice Dominick Carlisle.

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plaintiff's testimony that the operation was completed with the same instrument claimed to have been broken. It was brought out that if broken as the plaintiff contended, the instrument would have been useless, but the plaintiff had proceeded on the theory that there had been no substitution of instruments, although both tonsils were completely removed.

The plaintiff's case was practically devoid of any expert testimony for the purpose of connecting the injuries claimed with the alleged negligence. One man was called as a witness who had taught physiology, and had been a sanitary officer of the United States in the World War, and he undertook in part to explain the manner in which the piece of metal had reached the region of the anus, and the sort of injuries it might cause. The competent testimony, it seems, was all to the effect that the fragment could not have reached the point in the perineal tissue from which it was removed without cutting its way through the lower bowel into the perineal tissue. In the process of so changing its position, it was brought out, a foreign body would necessarily infect the perineum and cause a painful abscess, and there was no evidence that such a condition had existed.

Particularly important in the defense's expert testimony was the evidence given by several physicians that the progress of a foreign substance through the body would have caused no pain such as the plaintiff had described. One of the doctors so testifying said in part the following:

Q. What particular foreign bodies have you known to enter, and pass through the intestinal tract? A. You can mention most anything in existence.

Q. Well, hard or metallic substances or sharp substances particularly? A. The more common ones are safety pins and tacks.

Q. Closed safety pins? A. Well, both closed and open.

Q. What about foreign bodies, doctor, in the stomach; do you mean to testify that they don't agitate or irritate the stomach or cause any damage there? A. I don't believe I so stated.

Q. What would be the effect if you had a foreign body or object such as "Exhibit J" lodged in the body with these sharp corners on, lodged in the stomach? A. "Exhibit J" was the piece of metal I was shown?

Q. Yes. A. I don't think there would be any effect at all.

Q. You think that wouldn't cause any irritation in the stomach at all? A. I think

it very unlikely it would cause any irritation.

Q. Why do you say that, doctor? A. Because so many things of that kind are swallowed and pass through the stomach without causing any trouble.

Q. You say that you had experience once with the neck of a vanilla bottle passing through a person? A. Yes, sir.

Q. Was that your own case, doctor? A. Yes, sir.

In addition thereto the defendant's experts gave testimony that the patient's complaints of ill health and pains over the period of years were chiefly due to nervousness in connection with her menopause, which she went through at the time.

At the conclusion of all the testimony the defendant applied for a directed verdict, and the court granted the motion on the grounds that the cause of action was barred by the statute of limitations, and further that there was not sufficient evidence to justify submission of the case to the jury. From the judgment entered on the verdict, the plaintiff took an appeal.

On the appeal to the Supreme Court of the State the judgment of the court below was affirmed by a divided court. The Supreme Court held that the statute of limitations was a complete defense, but they went further and said that disregarding this technical defense the plaintiff had not on the trial adduced sufficient proof to warrant the submission of the case to the jury.

Broken Screw in Leg

A middle-aged man was struck by a hit-and-run driver and taken to a hospital. He was found to be suffering from a fracture of the mid-third of the tibia with posterior and internal displacement of the upper fragment and overriding amounting to over an inch. He was found also to be suffering from tertiary syphilis. The reduction of the fracture was delayed by reason of ulcers and blisters on his leg at the site of the fracture of the tibia. After he had been in the said hospital as a patient for a week he was transferred to a second institution for the purpose of receiving treatment for both the fracture and syphilis. At that hospital he came under the care of the defendant doctor, a general surgeon. The doctor when he first examined the patient found that the fracture had been unreduced for too long a time for him to attempt a manual reduction.

Preliminary treatment was given to the patient to build him up physically for an

operation and an operation at the end of a week was performed for the purpose of inserting a Lane plate. When the doctor was inserting the screws, through some defect in one of the screws it broke and the tip of the screw remained imbedded in the tibia. The patient was under a spinal anesthesia and was told of the occurrence and told that no attempt would be made at the time to remove it, for in order to get it out it would be necessary to gouge out a large piece of bone which would be dangerous in view of the patient's condition of syphilis. Patient remained in the hospital for about two months and had an uneventful recovery. Some time thereafter the plate was removed from the patient's leg and again since the fragment of the screw was doing no harm it was left in the leg.

The screw remained in the patient's leg for somewhat over five years when the patient consulted another doctor with respect to a condition of osteomyelitis. At that time x-rays showed presence of the

screw and the doctor then in charge of his case, decided to remove the screw, at the same time he treated the condition of osteomyelitis, although he did not find any apparent connection between the presence of the screw and the disease.

Some time later the patient instituted a suit against the first surgeon based upon his failure to remove the fragment of screw from the leg at the time it broke off. The action was not started until a considerable period of time had elapsed and, therefore, the two-year statute of limitations applicable to malpractice actions was a bar to the chief complaint of the plaintiff, that is, the complaint of improper treatment. However the plaintiff proceeded on a cause of action based upon an alleged breach of contract. When the case was about to be reached for trial the plaintiff obviously feeling that it was impossible for him to prove the cause of action, stated in his complaint, voluntarily discontinued the action against the doctor.

Books

REVIEWED

Recent Advances in Ophthalmology.—By Sir Stewart Duke-Elder, M.D. Third Edition. Octavo of 434 pages, illustrated. Philadelphia, P. Blakiston's Son & Company, Inc., 1934. Cloth, \$4.00.

To anyone who has followed the very interesting growth of *Recent Advances in Ophthalmology* as it has appeared in successive editions, the appearance of the new volume is an added pleasure. That the work presents in an orderly manner the progress of certain fields of ophthalmology is obvious, but one finds certain questions quite definitely answered—questions which have been becoming prominent for the past two or three years. E.g.: What is the accepted status of the etiology of trachoma at a time when Noguchi's classical studies were reviewed by numerous workers? Another question: In view of the demonstrated absence of dilator fibers in the retinal vessels, what is the mechanism by which their caliber is increased so obviously in various diseases? What is the status of radiation treatment of intraocular tumors? What is the difference between epidemic herpes zoster and simple herpes of the cornea? What are the present views on the pathogenesis of such conditions as cataract, sympathetic ophthalmia and glaucoma? These questions and innumerable others are discussed in a clear and delightful manner in this the third edition of *Recent Advances in Ophthalmology*.

The reviewer can only hope that there will be no interruption in presentation of successive editions, for each is a delightful stimulus and convenient means of keeping up with the times.

JOHN N. EVANS

Diseases Peculiar to Civilized Man.—Clinical Management and Surgical Treatment. By George Crile, M.D. Octavo of 427 pages, illustrated. New York, The Macmillan Company, 1934. Cloth, \$5.00.

This is a unique book, the theme of which is that neurocirculatory asthenia, hyperthyroidism, peptic ulcer, diabetes mellitus, and epilepsy are related diseases. These diseases are presumably due to increased activity of the brain-thyroid-adrenal-sympathetic system, "the kinetic system." The control of this increased activity

or hyperkineticism may be brought about by the removal of the thyroid, the excision of certain sympathetic ganglia, or denervation of the adrenal glands. The treatment may involve only one point of attack or in some instances more than one, before the desired result may be obtained.

The first half of this book is devoted to a consideration of the background of these diseases, their symptomatic manifestations, the diagnostic methods, and the rationale of the surgical therapy that has been applied. That part, dealing with the surgical anatomy, the operative technic, the postoperative complications and the end results following adrenal denervation, should be of special interest.

The second half of the book consists of case histories with interesting comments listed as progress notes. In addition to the previously mentioned disorders, Dr. Crile has given a short account of his experience with the psychoneurosis and arterial hypertension.

The book should be well received and certainly clarifies many uncertain rumors regarding adrenal denervation that have supposedly emanated from Dr. Crile's clinic.

JEFFERSON BROWDER

Modern Treatment in General Practice.—Edited by Cecil P. G. Wakeley, D.Sc., F.R.C.S. Octavo of 426 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$4.00.

This is a reprint of a useful series of articles which appeared in the *Medical Press and Circular* of London. There are 56 practical discussions on the treatment of various diseases, among them "Diabetic Coma," "Acute Circulatory Failure," "Burns and Scalds," "Obesity," "Syphilis," and many others. In the article on the "Etiology and Treatment of Disseminated Sclerosis" the possibility of infection as cause is considered and a relationship is suggested to post-vaccinal encephalitis, post-measles encephalitis, and acute disseminated encephalo-myelitis.

The subject matter is generally easy to read and presents much of interest.

W. E. McCOLLUM

WILL AMERICA COPY GERMANY'S MISTAKES?

EDITOR'S NOTE: The following excerpt is from a release issued to the press by the Bureau of Public Relations of the Medical Society of the State of New York.

ALBANY, N. Y., Feb. 24, 1935.—“The acid test of experience condemns compulsory health insurance schemes wherever they have been tried,” stated Dr. Arthur J. Bedell, president of the Medical Society of the State of New York here today, in opposing the bill now pending in the State Legislature.

“The medical profession disapproves of the proposed law because this method of handling medical care is damaging to the patient and disastrous to the doctor.

“This protest does not mean opposition to the policies of the administration in its recovery efforts or in any other phases of the ‘New Deal.’ However, physicians as a class are better qualified to speak than any other group, as to the effects of a compulsory health insurance law on the community, and the Medical Society of the State of New York, representative of the physicians of the state,



GUSTAV HARTZ

Labor Economist of Berlin, author of this pamphlet and of several books on Germany's social politics. He says that the social insurances of his country are largely responsible for her present plight, and he suggests a new plan for looking after unfortunates without making their misfortunes permanent.

rejects the project because it will not work, and because what it will bring to the community is quite the opposite of the expectations of its well-wishing proponents.”

Dr. Bedell pointed to the utter failure of compulsory health insurance in Germany, where it has been tried for half a century. He said that Gustav Hartz, labor economist of Berlin, and author of several books on Germany's social politics, has analyzed the fallacies of the scheme and exposed to the world the harm, rather than good, that compulsory health insurance has actually produced. Dr. Bedell stated that Mr.

Hartz' valuable report which is entitled, “Will America Copy Germany's Mistakes?” is to be reproduced in full in the March first issue of THE NEW YORK STATE JOURNAL OF MEDICINE as translated from the German by the Pennsylvania Self-Insurers' Association of Philadelphia.

German Labor Economist Offers New Plan to Avoid Pitfalls of Old One

FOREWORD

"The proof of the pudding is in the eating thereof."

If compulsory social insurances are desirable, as the powers that be in America today seem to think they are; if they are to be amplified and pyramided in the hope of improving the condition of the people as a whole by promoting peace, contentment and security, there should be unmistakable and indubitable evidences of these highly-desirable ends in the older countries of Europe where social insurances originated and where they have been in actual operation over a long period of years.

This pamphlet is a brief resume of two books written in Germany by Gustav Hartz, of Berlin—"Irrwege der deutschen Sozialpolitik," published in 1928, and "Bankbuch Statt Almosen," not yet in print. The titles translated mean, "Errors of Germany's Social Politics," and Bank-book Instead of Alms."

Feeling that our legislators should be fully informed before committing themselves to irrevocable mistakes, the Pennsylvania Self-Insurers' Association persuaded Mr. Hartz to attempt a digest of his studies, covering half a century of practice in Germany.

First, a word about Mr. Hartz himself. He was a workman and his father before him was a workman. Orphaned at the age of 11 years, he was taken in by a peasant neighbor, who brought him up at the expense of the national welfare funds. His youth was one of grinding poverty and hard work. At the age of 18 years, he joined the clerks' trade union and rapidly rose to leadership in the organization.

Until trade unions were abolished under Hitler—an inevitable result of Government management, which some of our own Labor leaders do not seem to realize—he continued to be one of their outstanding spokesmen.

Mr. Hartz served through the war and received the Iron Cross for gallantry in action. He became a member of the Reichstag, and is at the present time connected

with the largest publishing firm in Berlin.

His books are written from the workmen's point of view, not the employers', and they are based upon a study of facts and procedure which has given him a place as one of the foremost economists of his country.

He is not one of those who would tear down something and leave nothing in its place, but he has a plan of his own which he considers infinitely superior to social insurance, namely, compulsory savings. He proposes that every worker be compelled by law to save a certain percentage of his earnings, deposit them at interest in his own name in a bank under Government protection, and out of them, take care of his own rainy days; create his own security.

The plan is quite ingenious and was receiving the serious consideration of the Nationalist party leaders, before they and all other parties were overthrown by Hitler and his Nazis.

Mr. Hitler himself seems to be well aware of, and to some extent in sympathy with, Mr. Hartz's ideas, for he is ruthlessly revolutionizing management and policies of the bankrupt funds, and has even abolished unemployment insurance for domestic servants, because he discovered that it, in turn, was abolishing domestic employment.

Of course, the same tendencies, if not in the same degree, must ultimately be felt in all other lines of human endeavor, for whatever increases business hazard, dampens business enterprise.

We submit this pamphlet for the edification of those who are still able to subscribe to the fine old motto on the walls of our House of Representatives at Harrisburg:

"Ye shall know the truth, and the truth shall make you free."

WALTER LINN, *Secretary*
Pennsylvania Self-Insurers Association
Finance Bldg., Philadelphia,
January 10, 1935.

WILL AMERICA COPY GERMANY'S MISTAKES?

Results of a Half a Century's Practice of Social Insurance in the Land of its Inception

GUSTAV HARTZ

Written and translated for the Pennsylvania Self-Insurers Association, Finance Building, Philadelphia

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Reasons for the Introduction of Social Insurances

Almost exactly 50 years ago, the first law of modern workmen's insurance (social insurance) of the world came into force. It was the law referring to sick insurance for industrial workmen in Germany. Starting in Germany the idea of social insurance spread but slowly, but ultimately found its way into many States. It became the basis and corner stone of modern workmen's social politics.

When, under the great statesman Bismarck's chancellorship, social insurance was first introduced, he was, and not without reason, warned against taking this "jump in the dark," for nowhere did any experience in the matter exist.

Now, the introduction of social insurance no longer means jumping in the dark; we look back upon an experience of 50 years, that points out the way to real social politics—and at the same time shows how they should not be made.

It is not advisable to give ear to the biased experiences of advocates of social insurance who, in many cases, draw profits therefrom, for there is no institution in all the world that is so much extolled and the praise of which is so little justified as social insurance. The cause for this praise is to be sought in its sound ideas and good purposes which none but those devoid of all moral sense can dispute. Who could be hardhearted enough to stand by and watch a fellow creature starve or drown, had he the power to save his life?

Abou-ben Adhem Antedated Marx

Help in need is a matter of course based upon Christian charity and morals.

No one can deny that this is the soil the idea of social insurance sprang from; this, coupled with the consideration of clever, far-seeing statesmen who recognized in increasing poverty and dissatisfaction a

danger for the State which they wanted to evade. The motive for the introduction of German social insurance was a very simple one which has, in its fundamental idea, become typical for all States, however much the outer causes and the strength of the single reasons may differ.

Men Gathered in Industrial Centers

Owing to the rapid development of industry the number of industrial workers greatly increased and went on increasing. They crowded more and more into the big towns and industrial centers. The conditions of life were none too good. Wages were low and the workmen had no resources to fall back upon. The industrial proletariat, whose only capital was their capacity to work, had sprung into being. Should they lose their working power entirely, or even temporarily, their families would be faced by dire want. They would be destitute, have to rely upon the charity of their fellowmen, or would be forced to accept the help of the community. And the life of those who were lucky enough to have work was clouded also by doubts concerning the future.

Among these discontented masses the firebrand of the doctrines of Marx, attacking the State and the existing social order, was flung. Though the socialist laws forbade Marxist organizations and open propaganda, the doctrines crept in through a thousand channels finding a fertile soil among the proletariat, and it took on dimensions that threatened to endanger the State.

These State-political reasons were primarily decisive in the establishment of social insurance.

It's All "Unemployment" Insurance

The State wished to relieve the workmen of the anxiety for future disability, when they might find themselves without earnings. It also wanted to put an end to

their grumbling, to crush revolutionary aspirations; in short to turn the workmen into contented citizens.

Added to this was a high sense of moral and religious duty, a feeling of charity, and the State leaders' sense of responsibility for the poorer classes.

To consider unemployment insurance an achievement of recent years, to call it the "crown of social insurance" is a mistaken view, for every social insurance is an unemployment insurance, whether the unemployment is due to illness, accident, early incapacity, old age, or to being out of work.

The introduction of social insurance has at all times and everywhere been caused by too dense a population that has got into trouble through loss of wages, and was unable to bridge over the time of waiting from its own private means. Whether that class came into existence through the colossal social transformation in Germany 50 years ago, or now, owing to the devastating economic world crisis brought about by unemployment, is of small importance.

Poverty the Cause of Social Insurance

It must be stated here that neither unemployment, accident, incapacity nor old age created the necessity for the State's establishing social insurance. Ever since the beginning of civilization the lives of all humanity have been accompanied by such hazards—that of the millionaire as well as of the proletarian, of master as well as of man, of the head of the State and the crossing-sweeper, whereas social insurance is but 50 years old. I have never heard of a State introducing a sick and old age insurance for millionaires or an unemployment insurance for manufacturers and other employers, although in all States there are many to be found who not only work without profit but even at a considerable loss. And yet sick and old millionaires have certainly been known to exist. Are these citizens of smaller value to the State leaders than they are passed over by social welfare?

Social Insurance Creates Poverty Instead of Curing It

The reason for this is of an entirely different nature. Those people have their resources, they are provided for by their own private means. Should the State make provision for sick millionaires or be willing to allow employers 50 per cent of their losses at times when they are making no

profits, the statesmen supporting this plan would certainly be considered insane. This representation may seem rather crude but it shows the complaining sick, unemployed, invalid or superannuated workmen the actual cause that led to the establishing of social insurance. The poverty of the masses!

Destitution in consequence of unemployment that befalls the impecunious is not really a social malady but rather a reaction, a fever, produced by a deep-rooted social disease, the masses' lack of means. Social insurance is as it were an injection against the fever, which however does not reach the actual seat of the disease. On the contrary frequent injections are harmful to the constitution and aggravate the disease.

It may easily be proved that social insurance is not only caused by lack of means, but it even makes of it a social principle, aggravates and spreads it, makes it permanent.

In the past century the opinion prevailed—chiefly in Europe—that for capitalist development it was an absolute law of nature that capital should be concentrated in an ever-decreasing number of hands, until the State confiscated all property, placing the administration in the hands of "society"—while on the other hand the number of the penniless constantly increased till all were poor. (This is the direct way to Bolshevism as it exists in present-day Russia, a deplorable end to social efficiency.)

Though the results did not prove this opinion to be correct and the number of capitalists of all countries grew immensely in the last century, the number of the impecunious has in consequence of the increased population, also constantly grown, giving food to the working classes' dream of everlasting poverty as their irretrievable fate.

"Property Means Robbery"

Proletarianism! Poverty! These came to be literally worshipped. Honest workmen were made to believe it their solemn duty to be penniless. The words of the French socialist Proudhon, "property means robbery," became their motto. Hate and envy of capital and capitalists flourished. The dissension of the classes grew into a class war that shook State and economics to their very foundations.

The instinct given man by nature to hoard for eventual times of need, which forms the basis of accumulating money and of acquir-

ing property—upon this all culture and progress are founded—could only be completely killed by a communistic socialistic vision in which people were not obliged to put money by out of a sense of self-preservation because they were shielded from the worst, from direct necessity, by social insurance

Our Workmen Were Not Proletarians

The best counter examples are the United States where, until the great crisis started, communistic-Marxian ideas could not strike root among the working classes, simply for the reason that they were not "safeguarded" by insurance, but the workmen, having to provide for themselves, put money by for a rainy day and were therefore in the Marxist communistic sense not proletarians such as had been carefully bred in Europe

One might have supposed that in Germany, with the most widely developed social insurance system in the world, a country where every workman was provided for in all contingencies of life—where the future mother was cared for, the first milk for the infant provided, where the funeral expenses, or those the deceased left behind were not forgotten by the social insurance, a social upheaval would be least felt. No proofs need be given for the fact that the reverse actually occurred

The Gun Went Off at the Wrong End

The State political results expected of the establishment of social insurance, viz, making the workmen contented and loyal citizens, were not only negative, but they actually led to ends opposed to those anticipated

No doubt these were not the only causes. Social insurance was however in so far responsible as the State by relieving the workmen, to a great extent, from the burden of having to provide for themselves, posed as the great 'benefactor'

This made it the scapegoat upon which all demands, all discontent were thrust. The so-called self administration of social insurance by the circles concerned, did nothing to improve the situation. Discontent and grumbling did not cease, it grew. This arose from the social insurance principle, which is only able to grant a minimum, and the odium of the insufficiency accompanying it, in connection with which the saying was coined 'too little to live on and too much for starving'. From the very beginning the social insurance legislation was scoffed at by the radicals who called it 'Beggars' soup politics' and they

never ceased demanding an increase of the allowances

That these demands, viewed with the eyes of the workman, were socially justified, and that the name given it by the people was not far from the mark, may be gathered from the following figures

Benefits Hopelessly Inadequate

The average old age and incompetence annuity at the present time amounts to

	Per month approximately
For the person insured	*M 28 [\$7 00]
Widows pension	M 18 [\$4 50]
Orphan's allowance	M 10 [\$2 50]

Sick allowance amounts approximately to half of the earnings

The same stands for the unemployment insurance

One can well imagine the feelings of a workman who for years, or for decades, has subscribed high dues but who rarely, in some cases never, made use of the insurances, now that he is ill or has lost his job he has to manage with half the amount of his wages, or in old age gets an insufficient allowance. Must he not grumble at his beggar's dole?

More Peace Promised, More Struggles Resulted

On the other hand the principle of keeping the allowance on an insufficient scale must be persevered in. For should the allowance equal the wages the consequences would prove ruinous to the workman's morale if in case of sickness he drew an equally high amount as that earned by hard labor

These incompatible contrasts are bound to be followed by new struggles. By means of the social insurance "the fatherland was to be supplied with new, lasting guarantees for inner peace," instead of which more and more social struggles ensued, which influenced the formation of political opinions more strongly than anything else

In States governed by parliaments with equal votes for all, the opposition, unbarrased by responsibility, use social political aspirations as the most efficient auxiliary for canvassing among the working classes. Whosoever promises most gets the most votes and with them the greatest

* Exchange on gold standard 4 20 marks to the dollar

political power. Social democracy in Germany, until its collapse, owed a great deal of its success to social insurance.

Social insurance was created in the struggle against social democracy. It became the strongest aid in forming political opinion in their favor. To use their own words, it got to be the "fourth pillar of their power."

Best Promiser Gets the Votes

All political groups happening to be in power have been, again and again, in consideration of impending elections, compelled to make concessions incompatible with reason and without economically sound foundation.

Though the greatest social crisis the world has ever seen may have been caused by many other factors, particularly by the war and the divers new phases brought about by it, that destroyed property accumulated in many generations, and by which a considerable part of social fundamentals were destroyed, the extent of the crisis in many countries did not become so great in spite of, but on account of, the existence of social insurance.

The social crisis has not been alleviated but, to the contrary, has been considerably aggravated by social insurance.

Woe to the State which imagines that crises may be alleviated or stopped by the introduction or the existence of a comprehensive system of social insurance! Sad disappointment awaits it. Every economic crisis swallows up the best organized social insurance and consumes its funds at both ends—at the end of the diminishing premiums and at the end of the increasing benefits.

Can We Hear This Warning?

The reason for this is chiefly that the greatest number of social insurances are not based on actuarial reserves as in the case of life insurance, but on a system of funds sufficient to cover the demand. They do not accumulate in long spaces of time a sufficient capital for future payments, but they live from hand to mouth. This method takes the premiums with one hand from the healthy and from the employed and pays it at once with the other hand to the unemployed and sick. Small reserves by no means improve this condition.

In the unemployment catastrophe the results were as follows: the number of unemployed increased with startling rapidity while that of the workmen still employed and paying premiums was continually diminishing. These premiums no longer

sufficed and had therefore to be raised. They went up from 3 to 6½ per cent of the wages. In the most critical time, when benefits were being reduced, and economic expenses increased, the wages were cut still more. To raise the premiums still further was simply impossible, and thus the allowances had to be repeatedly decreased. This procedure in each case increased the social tension.

Premiums Went Down; Benefits Went Up

The same methods had to be applied to sick insurance and old age pensions, for there the increasing unemployment resulted in a rapid diminution of premiums, while the expenses of the former remained almost the same, and of the latter increased incessantly. The disability insurance was insufficiently covered, due to loss of capital through the inflation and increased allowances. Having been reduced to the apportioning system, it lived from hand to mouth.

Business concerns were no longer able to pay the accident insurance dues. In some trade associations 50 per cent of the rates had to be obtained by levy of distress. The miners' pensions were repeatedly on the point of stopping payment.

In the time of her hardest social crisis, social insurance was Germany's greatest inner trouble.

The saddest inner-political heritage the new German government was forced to accept was the social insurance, the most vital part of which was on the point of collapse.

Not only in times of economic stress does the apportioning system heighten the crisis, but also in times when economics are on the upward grade, for then increasing receipts and decreasing expenses form a great temptation for raising the allowances, besides which it may lead to many unnecessary capital investments.

How the Budgets Jumped

It was in this way that the budget of the sick insurance rose in the years of apparent prosperity to the extent of 200 millions annually, reaching in 1929 the fantastic sum of 2,300,000,000 marks. In 1913 the budget of the sick insurance was still 660,000,000 marks. The same thing was to be found everywhere: in 1913 the budget of the entire social insurance system was

1,300,000,000 marks; in 1930 approximately 6,000,000,000.

And this without the expenses of public welfare that finally bore the greatest part of the burden of unemployment. The entire social budget, namely, social insurance plus welfare, amounted to 2,100,000,000 marks in 1913, but in 1930 this budget reached 10,800,000,000 marks.

But when the economic crisis came the promised and vested payments could not be kept up.

In treating with this subject we should constantly bear in mind that social insurance is a legal contract, based upon premiums paid and guaranteeing definite benefits, whereas voluntary relief is always at liberty to adjust itself to circumstances.

In Germany, nevertheless, the legally reinforced social insurance contracts then had to be changed and partly cancelled, and the "legal rights" only continued to exist on paper.

"Progress" That Proved to Be Fictitious

Yet it was the legal claim which had been played up as the real progress in social security.

In true insurance, the amassing of adequate capital is only possible when an approximate preliminary calculation of the demands can be made, as in the case of life insurance, which is based on mortality tables and similar actuarial statistics.

The risk of unemployment cannot possibly be mathematically calculated. Unemployment is a risk actuarially unascertainable.

Fixed Payments Can't Be Guaranteed

The name unemployment insurance serves to mislead public opinion. It should be called unemployment reserves, where the persons concerned bind themselves to pay a certain contribution, and where they are told: if you are unemployed you may "perhaps" get so and so much, but maybe only so and so much. Fixed amounts can of course be promised, but should the sums be insufficient the premiums must be raised.

To establish an unemployment insurance and to promise an unemployed man certain fixed payments against certain premiums—any mathematician who goes into the problem and declares it sound ought either to be knighted or hanged. I should certainly vote for the latter proceeding, knowing him to be a swindler. Or else an "insurance"

is made where every payment the single individual receives is strictly limited to the amount he has paid in, and then ceases. But then he would be just as well off if he himself saves his premiums.

"Not an Insurance Really"

In Germany the most firmly convinced fanatics on social insurance—such people do still exist and in most cases they fare very well—are even now sure that unemployment insurance "is not an insurance really." In 1927 this "Crown of social politics" was introduced, with fixed premiums and fixed benefits. Three or four years later nothing was left and all that remains of unemployment insurance today is its name. Now the welfare principle is applied for the unemployed: insurance allowance without examining the necessity, namely, with legal rights for six weeks only. Juveniles and working women have no legal claim.

The period for which benefits are made must of course be limited, as with a subscription of $6\frac{1}{2}$ per cent of their wages not all unemployed can be supported. The greater the number of unemployed the lower the limit must be set. At first the allowances were made for 26 weeks, now for 6 weeks. As in this crisis unemployment frequently lasts for years, most of the unemployed no longer receive any allowance. The unemployed insurance at present scarcely supports one-third of the army of unemployed while the other part is supported by the welfare and the crisis centres. The same was the case before social politics had their "crown" put on. These institutions draw their funds from the State revenues.

Thus the communes had to bear the chief part of the burden the same as before. It is a curious fact that the communes tried to cast off the burden by finding work for part of the unemployed, until the latter had paid their premiums into the unemployment insurance, thus gaining a fresh legal claim. Then the same thing could begin all over again.

That is the curse of the evil done by trying to force something into insurance formulas that is uninsurable.

Sick Days Jump from $5\frac{1}{2}$ to 28

It is not in the least different with the sick insurance. The unevenness in the business level, the seasons, holidays, a change of work, failing health and many other

things contribute to bring about a noticeable change in morbidity.

Since the sick insurance has been in effect, the average number of days of incapacity to work owing to ill-health, has risen from $5\frac{1}{2}$ to 28 days, although health in general has considerably improved.

In the strict sense of the word the sick insurance is no insurance either. From a technical and mathematical standpoint it is also quite unsettled in view of the moral hazard noted above.

This is clearly seen when considering that the individual insurance case, whether due to illness or unemployment, can be willfully caused or extended. Where is the border line between illness and health, between mere indisposition and illness, between dread of getting ill and bluff? And if the insured person is really ill, where is the border line between ability or disability to work? How can the duration of an illness be fixed?

Illness is the most incalculable risk in existence.

Even the doctor is mostly, or at least frequently, unable to diagnose correctly and to distinguish pretenders and hypochondriacs from really sick people, or rather to tell whether a man is fit to work or not.

"Hazy and Uncontrollable"

The same stands for unemployment. It can be ascertained if and when a man lost his job, but not whether he refuses work that is offered him—maybe because the work does not pay well enough; or whether he does odd jobs and thus finds other sources for earning money.

Also, the degree of diminished ability to work, due to an accident, can only be guessed at.

Of all the risks in social insurance only old age, death, and number of dependents can be exactly established. These are therefore the only cases in which an unobjectional actuarial basis, and an unquestioned legal claim are possible. Everything else is hazy and uncontrollable.

And on this unstable foundation was based a legal "claim"! Thus in millions of cases, wrong was turned into right and the gates opened wide to fraud.

A House Built on the Sands

I can here speak only briefly of these things. Additional material may be found in my books:

GERMAN

"Irrwege der deutschen Sozialpolitik," Scherl, Berlin, 1928.

"Die Nationalsozial Revolution, die Lösung der Arbeiterfrage," I. F. Lehmann, München, 1932.

ENGLISH

"Bankbook Instead of Alms" (will appear shortly).

What is decisive in judging the merits or the worthlessness of social insurance is not brilliant theories interspersed with sentimentality and false humanitarianism, but the rougher language of practice. A few words on that subject:

The sick insurance provides the workman with medical attendance free of charge, with medicine and other necessities, and with an allowance.

Anyone will at first sight consider this a great blessing for the workman as well as for national health. The reality, however, is very different.

A Nation of Valetudinarians

Dread of illness obsesses most people and this has been pressed into a system "illness made easy" by which the will to be well is strangled. The doctor is consulted a dozen times where once would be sufficient—the insurance pays. The prescribing of medicine, bandages, etc., is desired. When they have been obtained they lie about until they are no longer fit to be used and must be thrown away—the insurance pays. Besides it is nice to get something in return for the premiums paid year in and year out. Excessive "overdoctoring" is the result and fear of illness that shakes the will for recovery—the best aid to health. Pretenders and hypochondriacs are bred and the use of medicine becomes excessive. The advertising of certain remedies and cures created a medicine craze. A few years ago it was ascertained that four times as much money was used for doctors' fees and medicines for 35,000,000 of people in insurances as for 30,000,000 of uninsured. This was stimulated, unthinkingly, by a desire to get sick money. An actual run on the sick insurance allowance set in.

At first sight it seems improbable and paradoxical that a desire to obtain sick money that scarcely amounts to half the sum of wages should arise. It appears impossible that someone should, unless compelled by illness, forfeit his wages to get an allowance of half the amount. Unfortunately life does not run a straight

course between health, working ability, working possibilities on one hand, and illness and disability on the other, nor do people's minds and actions.

When Sick Benefits Come in Handy

In millions of cases, for example, when wages are being decreased, when work is scarce and work hours in consequence shortened, when there are fewer shifts, many holidays, work restrictions at certain seasons, outdoor work in frosty weather, 50 per cent of the wages is welcome. One objects to the work he is given, another does not feel like working, a third's time is taken up by some family matter for which he would have to take leave of absence and forfeit his pay. In such cases the sick insurance comes in handy. Besides this, there is also deceitful trickery. Fictitious contracts are made, doctors are induced to prescribe medicine and instead of the medicine toilet soap and scent, etc., are handed out by the pharmacies.

Doctors Driven to Mass Practice

How can this possibly be done? some ask. Those who consult doctors are supposed to be ill. That is all very well if the doctors were always able to detect whether the statements of the patients were correct. Often a diagnosis is impossible. He who would like to prove this should go to ten doctors, complain of headache, pain in the limbs, rheumatism. All ten will start a treatment for headache or rheumatism, without discovering that nothing whatever is the matter with the patient.

Besides that, all doctors are glad to get new patients, for do they not mean their livelihood?

Medical science has become a cheap article, and doctors have given up conscientious treatment. The genuine patient is neglected, is not given the necessary care.

The greater the mass consultations, the lower are the doctor's fees. The amounts paid to panel doctors for each single case are deplorable. They are therefore compelled to resort to mass practice.

The sick insurance unrolls the entire problem of the medical man's existence.

Mass demand compelled a limitation in the use of medicines. Doctors must not prescribe what they consider good for the patient, they only being allowed to give remedies entered in a book of medical regulations for insurance purposes.

The insured workman becomes a second class patient.

Wages Without Work Kill Thrift

Wages without doing any work—that is what the unemployment insurance amounts to—create in course of time aversion to work, and destroy the instinct for thrift.

Two years after the unemployment insurance came into force a member declared on the floor of the Reichstag, "Those who draw money from the unemployment insurance consider us fools."

A high government official proved that experience had shown that one-third of those drawing unemployment money were devoid of any sense of what is social, and that in one town of his district 43 per cent refused to take any job offered them.

A network of deception has been spread. Farmers exchanged sons, registered them as workmen, so that they might get the insurance in winter for both families.

Fictitious work contracts were made, and with illicit work a system of deception was established. Unemployed workmen getting their allowance, snatched work away from artisans and businessmen, etc., as, owing to the allowance, they were able to do the same work for less pay than honest workers who had to pay rates and taxes. Employers engaged workmen for half wages without registering them, and paid neither wage tax nor social insurance premiums, and the "unemployed workman" pocketed his "allowance" besides.

Raids on "Illicit" Workmen

Since last year police raids are occasionally made in the big cities in search of illicit workmen in market halls, ports, at railway stations, etc. Thousands were caught, part of them were imprisoned.

Bluff is used for cheating the accident insurance. The casualty hospitals are called "bluffer universities."

All meeting with an accident try to represent the injury received worse than it is in order to obtain a higher allowance.

Certain methods of medical treatment were forbidden as they could not possibly have the desired effect, the patient not having the wish to get well and to forfeit the allowance.

The annuity, old age, disability insurances have introduced a treatment for strengthening delicate patients, so that they need not start payments too soon.

Holidays Now Taken on Sick Insurance

In the first months of the year the applications for cures to the disability and employees insurances pour in because many are anxious to take their summer holiday at the expense of the social insurances.

Matters soon made an extensive controlling system necessary. This ended in badgering all persons concerned.

Patients are visited in their homes by controlling officials who have to convince themselves that the patient is really ill and not doing any work. The patients are therefore allowed certain hours for going out by the doctors.

The sick insurance engages so-called confidential doctors who have to submit the patient to a final examination to see whether he is too ill to work. The results of such examinations are to a great extent startling. Here is one instance from among thousands: 2008 patients were ordered to appear for a final examination. Eight hundred sixteen of them at once declared their complete recovery; 289 were found to be well by the confidential doctor. So nearly 50 per cent were not ill at all.

Medical Policemen Now

The confidential doctor is, so to say, the medical policeman, who not only controls the patients but also his fellow doctors who are treating them.

The genuine patient is justly indignant to find that the existence of his illness is doubted, and that he who has always paid his premiums regularly and has a right to demand conscientious attendance, is considered a cheat.

This system, together with the rest of the bureaucratic apparatus, has wedged itself between doctor and patient, completely destroying the patient's confidence in his physician, which greatly retards all recovery.

The sound idea of sick insurance has become thoroughly unsound, and the harm it does far outweighs its advantages.

In the unemployment insurance the controlling is done by making the workmen have a stamp put on their premium card once a week. How defective this method is, is proved by the problem of "illicit work" and the police raids for illegal workers.

I once stated in a lecture that I knew the way of quickly diminishing the number of unemployed by 50 per cent: the state was to enlist half of the army of unemployed as auxiliary policemen to shadow

the other half. This would be effective control provided that there were no secret understandings between the shadowers and the shadowed.

Pronounced Well, but Dies Two Days Later

In any other way control is ridiculous. Those who know anything about medical certificates; those who know that in ninety-nine cases out of one hundred they contradict each other, and who also are aware that medical opinion forms the basis for the amount granted by the accident insurance as well as for the sickness and disability allowances can easily imagine what happens. They will not be surprised that a confidential doctor whose task it is to keep the number of patients low, declares a patient recovered who nevertheless dies two days later.

The connection between the different risks in the social insurance system is of much more importance than would at first appear.

So the so-called occupational diseases (twenty-two of them) are classed as accidents and passed on to the accident insurance.

Annuity insurance takes upon itself the medical treatment that really ought to fall to the sick insurance, whereas the sick insurance pays sick money for twenty-six weeks only. If the illness lasts longer, the disability insurance has to pay. On that account twilight zones and certain legal relations exist between the different branches of social insurance.

Were there only one insurance all responsibility would be loaded upon it. Until the unemployment insurance existed all who were dismissed from their jobs reported as patients to the sick insurance to obtain the sick insurance allowance.

Welfare Remedy for Every Ill

We find that the extension of social insurance takes on an automatic tendency. As long as there was no unemployment insurance, the sick insurance formed the best barometer for the state of business. When social insurance was first planned in Germany, accident insurance only was considered. Accidents not being of frequent occurrence, relatively few workmen met with accidents. When the sick insurance was made compulsory, many more accidents occurred. These accidents were not reported as accidents, but as sickness. These accidents were not reported as accidents, but as sickness. These accidents were not reported as accidents, but as sickness.

Bismarck considered sick insurance a supposititious child, it was the first to be enacted.

When the world depression set in, the time seemed to be ripe for unemployment insurance.

When, during the last few years, the sinking birth rate pushed the problem of population into the foreground, the introduction of a mother-and-parenthood insurance was seriously discussed.

In the beginning nobody thought of insuring all workmen, merely needy ones. But soon everybody was "needy." Today, with members of families included, two-thirds of the nation are compelled to be insured.

Goal Is to Make All People Pensioners

A pension and support craze has been fostered that aims to make the entire population of the country state pensioners, relieving the individual thereby of the duty of caring for himself, and of saving.

State pensions mean the death of all will to work and of all personal ambition.

Liberty and progress are possible only where the will to get on and to accumulate capital is not hindered, but furthered.

Social insurance has produced an unbelievable number of questions and problems hardly fathomed by the uninitiated, who face them quite helplessly.

Practice alone gained by fifty years of experience can answer these questions.

What is given here is merely a few outlines.

It is impossible even to mention all doubts in a short paper such as this, far less to answer them explicitly.

From what has been said it can however be clearly seen that social insurance is no simple matter but an extremely intricate problem.

Mushroom Growth of Laws and Administrators

Therefore a few lines about laws and administration. Social insurance laws consist of 2700 paragraphs, 200 of these have lately been abolished. A great number of amendments, executive regulations and alterations supplement this confusion of paragraphs. Even experts can only make them out in parts.

By extending and employing these paragraphs another tangle of commentaries has grown up around them. To an ordinary mortal this work is a book with seven seals. Nor could it possibly have been simplified.

As soon as such a law has been made, flaws are detected. These must again be rectified.

Ever since social insurance has existed, it has been subjected to reforms, one following the other in rapid succession.

Legislation is never done with social insurance. In keeping with its complexity, its expansion, and its millionfold ramifications in the life of the state and the people, is the size of its organization and its administrative apparatus.

The Growth of Bureaucracy

The number of officials required for the administration of social insurance varies in accordance with the amount of work being done. In total, and including the unemployed, 22,000,000 is the approximate number of insured persons.

There are about 6500 sick insurance units. Unemployment insurance is administered from one National institute, which controls thirteen state centers and 361 local centers.

The premiums for the unemployment insurance are collected by the sick insurance.

The accident insurance is administered by 66 trade organizations with 261 sections and 40 agricultural organizations with 526 sections.

The disability and old age insurance is managed by 29 regional "Landesversicherungen" (Offices of the provinces) and 6 special institutions.

One of these is the Reichs-institute for clerical employees and the Reichs-miners' insurance office with 16 district offices.

Billions of Premiums Never Reach Goal

During the last few years the administration costs amounted to 400 million marks annually. The costs cannot be called too high and cannot possibly be materially reduced.

However, the whole matter gets another aspect in view of the fact that these expenses are covered by workmen's premiums and are deducted year by year from the money intended for these men's support. In one worker's generation—say from the age of 20 to 60, or 40 years—it means the gigantic sum of 16,000,000,000 marks, which therefore is lost from the funds originally intended for sick, unemployment and old age insurances.

An army of about 70,000 officials is

required to handle part of the wages of the workers under compulsory administration, for what else is social insurance?

For every 200 workmen one official is wanted in the above-mentioned administrative apparatus, which by no means comprises the entire machine. A great part of the administrative body is borrowed from other departments of government, as for instance the Reichs-post office, as well as private business concerns. The post office sells the premium stamps and pays out annuities for the old age insurance.

Wage Computation Has Become a Science

The private business concerns serve as collecting agencies. Their duty is to compute the premiums, to deduct them from the wages and to convey them together with the employer's share of the premiums to the different offices of the social insurance. The wage departments therefore have become unduly enlarged, causing considerable extra cost which is hard to account for. Wage computation has gradually come to be a science in Germany.

But that is not all.

The extension of the administration, its multiformity, the complication of its legal regulations, requires a special supervising and judicial staff. This work is accomplished by a Reich-insurance office, 3 regional insurance offices (these are now going to be closed down), 68 head offices and 1100 insurance offices. The costs for this army of officials are not included in the administrative expenses, but are borne by the State—also the administrative expenses of welfare relief, which has provided for the majority of the unemployed lately.

Palaces for Bureaucrats

What gigantic sums of the workmen's capital is invested in the buildings in which the offices are housed can be calculated from the figures of the administrative apparatus. In many towns the buildings of the social insurance are the largest in the whole cities. In the period 1918 to 1932 particularly, so much money was invested in these palatial buildings that it resulted in a public scandal. The sick insurance palaces and the unemployment office buildings vied in size and splendor with the administrative palaces of great financiers and industrial concerns, or representative public buildings. In many places they even outshone them. While many workmen are

living in dilapidated houses, their money was used for building huge, luxurious offices, which bore no sign of their purpose being the administration of the hard-earned capital of the working classes, put by for times of need.

To these must be added numerous other buildings: laboratories, dental stations, medicine depots and a considerable number of nursing homes (the latter must not be confounded with the many hospitals, sufficient in number, clinics, etc., belonging to the State or universities, towns, religious organizations, co-operative organizations, etc.). The incalculable sums invested in these buildings and their luxuries can never be converted into allowances for the support of the needy.

Scandals of Administration

Downright corruption adheres to the palaces. One scandal follows the other. Administration officials, suppliers, architects were dragged into the mire. Common embezzlement, bribery and other dishonorable acts on the part of officials were uncovered. Excessive squandering of money, doctors, dentists, chemists, even employers were involved, the latter chiefly as wilful premium defrauders. They had deducted the premiums from the workmen's wages without paying them to the insurances. To this came the unnecessary, dishonest exploitation of the insurances by pretenders, annuity chasers, illicit workers.

All this at the workmen's expense, for the part of the premiums supposed to be paid by the employer is in reality borne by the workmen, either as consumer or as wage earner. The idea of burdening the employer with part of the premium is good and sound, but only as long as it was low. Today the employer's share is about 10 per cent of the wages and in consequence one of the most vital expense items of the economic system. As the employer's premium share is immediately connected with the wage, it is shifted over on the wage.

Wherever It Comes from the Workman Pays

In Germany no one any longer doubts the fact that the employer's share of the premium is taken from the workman's wages. What the employer pays as his contribution to social insurance, he cannot pay the workmen in the form of wages.

Some years ago a well known trade

unionist even had to admit that countries without social insurance have higher real wages than Germany (United States of America, Holland, Scandinavia) while another said: "high wages are the best social policy." In other words, social insurances handicap wage development. But not only this, they also intensify wage struggles.

Premiums started on a modest basis. The first were $1\frac{1}{2}$ per cent for the employee and $\frac{3}{4}$ per cent for the employer. Today, the entire premium averages almost one-fifth of the amount of the wages and for miners it is nearly 30 per cent. The involved way in which the contributions are divided between employer and employee is omitted here, as an alteration is pending. It is expected that employer and employee will in future bear equal share, about 10 per cent each. Is it to be expected that an employer can afford to make an employee a present of 10 per cent in addition to his wages?

Intended Cure Proves Rank Poison

The only part of the wages he might be able to save in order to build up a capital is taken from him, thus preventing him having any resources of his own. Whether he wants to or not, he is doomed forever to remain a proletarian.

It is social insurance therefore that makes needy people, in order to give them after they have become needy, very inadequate support. Social insurance originally was established to help those in distress. Now there are poor of its creation.

The assertion that social insurance increases poverty, making it an everlasting doom from which there is no escaping, a fate accompanied by discontent and despair, is evident. It becomes clearer still at sight of a few figures. I do not take one-fifth but the lowest average figures now valid in Germany—17 per cent of the wages. The result is the yearly premium amount, as shown in the table.

Weekly wages....	20,-RM	[\$5.00]	25,-RM	[\$6.25]	30,-RM	[\$7.50]	40,-RM	[\$10.00]
Yearly premium...	177,-RM	[\$44.25]	221,-RM	[\$55.25]	265,-RM	[\$66.25]	354,-RM	[\$88.50]
Weekly wages	50,-RM	[\$12.50]	60,-RM	[\$15.00]	70,-RM	[\$17.50]		
Yearly premium...	422,-RM	[\$105.50]	530,-RM	[\$132.50]	609,-RM	[\$152.25]		

Welfare Dollar Can't Be Wage Dollar

Certainly not. He keeps it in mind when fixing wage rates. Of the part of the premium an employer pays, the workman hears and sees nothing and still the amount is deducted from the gross amount of his wages. He can only reckon with the net wages which have been shortened by 20 per cent. Consequently the wages always appear too low. On the other hand, the social burdens have always been a handy excuse for the employers, even when wage demands were fully justified.

Must not this intensify wage struggles? Anyone can imagine the feelings of a workman, who week by week, month by month, year by year, suffers a compulsory loss of one-fifth of his earnings. This loss of a considerable part of his wages really means expropriation.

Juvenile workers start paying at the age of 14 and 15 and go on paying until the age of 65, or until completely disabled.

Must the idea not arise that a workman should be allowed to keep his own savings and to invest them at interest, so that he may be able to keep himself and his family in the time of need out of his own means? This idea becomes more concrete, when we consider in what way the sum, if properly invested, might increase at an interest of 5 per cent which still seems adequate in Germany.

Less Management, More Pay

In the accompanying table are the results supposing that payments are made continuously and nothing withdrawn, between the ages of 20 and 65 years, for a workman with a weekly wage.

20,-RM	[\$5.00]	25,-RM	[\$6.25]	30,-RM	[\$7.50]	40,-RM	[\$10.00]	50,-RM	[\$12.50]
28,000 Rm		36,000 Rm		43,000 Rm		56,000 Rm		77,000 Rm	
	[\$7,000]		[\$9,000]		[\$10,750]		[\$14,000]		[\$19,250]
60,-RM	[\$15.00]	70,-RM	[\$17.50]						
86,000 Rm		100,000 Rm							
	[\$21,500]		[\$25,000]						

Even if calculating at low interest as the basis, the figures reached will be enormously high. For a calculation covering 45 years, neither very low nor very high interest must be taken, but a medium one.

It must, however, also be considered that these figures only refer to one member of the family, that most workmen have a wife, who before marriage worked and paid insurance premiums, too, that many of them

Reinhard

Gesellschaft mit beschränkter Haftung

Löhnung vom 6. Okt. bis 12. Okt. 34

Name Herrmann Hillenbach

48 Stunden à M. 81 M. 38.88

— Überst. à M. — = M. —
38.88

Bruttolohn M. 38.88

Abzüge:

Bruttolohn... 38.88 (abgerundet)

Steuerfrei 24.88

10% Steuer v. 14.88 M. 1.40 (5% v. Lohn)

Krankenkasse . . . 1.30 (davon 7/8)

Erwerbslosenfürsorge .. 1.26 (6.5% v. Lohn)

Invalidenversicherung .. 1.05 (dasselbe frägt)

Arbeitslosenhilfe . . . 0.95 (2.1% v. Lohn)

Bürgersteine .. 1.50 (wird am 10. x 24)

Ehestandshilfe .. 1.14 (3% v. Lohn)

Gesamt abzug M. 8.60

ab 1/11. Monat

neu hinzü:

Nettolohn M. 30.28

Arbeitsfront (nach Pöppel) — 83

Wohlfühlwerk (20% v. d. Lohnsteuer) 29.45

GERMAN PAY ENVELOPE

It shows actual deductions from the weekly wages of a workman. The average over the whole country is 20 per cent of the pay. In some instances, it amounts to 30 per cent. Mr. Hartz points out that it makes no difference whether the assessment is deducted from the wage of the employee or whether the employer puts it in for him. The workman pays it in either case, since a mark paid out by an employer in social insurance premium is obviously a mark that cannot be paid out in wages

go on working, when they are married and pay premiums, and that the children at the age of 14 or 15 start paying also.

A Newer Plan—Compulsory Savings

Only then is it possible to realize how the workman's family is pauperized by insurances.

Though such proofs are only of theoretical value, they clearly demonstrate that there is no necessity for men to remain proletarians forever; that they need not allow themselves to be forced into the straightjacket of collective mass insurance and that on rare occasions only they need be obliged to resort to help from others.

The proposal has therefore been made to substitute for social insurance, which has so many unavoidable drawbacks, a system of social savings accounts, each workman banking for his own account. Then, in case of illness, unemployment, etc., he would be able to fall back upon his own resources first of all.

In the same manner as the workman is now compelled to pay premiums for social insurances, he should be obliged by law to make regular deposits into his savings account.

This would be the duty of the State, as in cases of distress of great dimensions, providing for the poor would fall to its share. Under a social insurance system, the number of people who, when they have no earnings must be supported, is constantly increasing, while the number would diminish if people were forced to save.

Trend Would Be Toward Independence

A State that has to take the responsibility of providing for the majority of its subjects, as is the case with social insurance, is bound to collapse when the time of need comes.

Every single individual should be made to see that he has the duty to provide for himself.

Independence and a sense of responsibility of the citizens are the only means to save a State from too great a social burden, as was the case in the United States before the great crisis came. There the inexorable "I must" drove everyone on, for no social insurance existed to take the trouble from the people in a time of reverses.

But every nation has a great number of subjects for which a compulsion, it only being a moral one, does not suffice. They have not enough will-power of their own to put by sufficient of their earnings for a

rainy day. Besides this there are others who rely on their luck and, trusting in everlasting prosperity, live carefree lives, forgetful of times of distress.

Only Felt By Ne'er-Do-Well

These carefree, weak characters are the ones that require State compulsion. For them laws are a necessity—also in consideration of the others who would be burdened with the care of them. For the strong-minded the compulsion is merely the fulfilment of what they themselves consider a natural duty. Therefore it does not mean compulsion for them. A duty to save, prescribed by the State, is the best solution of this problem. All this can be carried out with the means which are now wasted for social insurance.

Instead of an insurance card the workman would have a bank book, the best way of giving him a sense of responsibility.

For the carrying out of this no new institutions would be required. The existing banks and credit institutions together with the postal saving banks or similar institutions would suffice.

The administration costs would not be drawn from the deposits, as in the social insurance from the premiums, but would support themselves the same as in all banks, from their own profits. On the contrary, the savers would be paid a normal percentage of interest besides.

Here the State would only have a suitable control and regulations for the investment of the capital as, for instance, it has in German savings banks.

Right of Inheritance Remains

These savings must of course only be used for the social purposes they are intended for, and must be blocked until a certain amount has been accumulated.

These restrictions are very slight indeed compared with the entire loss of disposal rights under a social insurance system, for here the property rights as well as the rights of inheritance remain, which is not the case with any of the social insurances.

All waste would disappear, all control might be abolished when men no longer ate out of a large common dish but had to pay for everything out of their own pockets.

The administration of social saving banks can be made quite easy and simple.

The calculation of the wages would no longer be complicated, and the amount of

the employer's premiums would no longer be camouflaged and deducted from the workmen's wages. The workers would get the full amount of their wages, but part of them in form of a bank credit. Details it is not the place to discuss here, but that this method is easier to carry out than that of the involved social insurance is evident. The laws required would not need more than one-tenth of the paragraphs of social insurance.

Five Per Cent Helpless, as Against 66 2/3 Per Cent

Those few who, under a savings account system, might fail to be able to support themselves (it should not exceed 5 per cent of the entire number) must of course be taken care of by society. That they could be cared for better than when all are obliged to rely on public help, stands to reason.

Existing institutions for the aid of the poor, trade unions, voluntary welfare organizations such as the Salvation Army, Red Cross, and other charitable institutions, etc., would be quite sufficient. This work might also be regulated and supervised by the State. Flexible support which depends on the extent of the distress and the requirements in each individual case, is more social than the so-called help of social insurance, which adheres rigidly to regulations and paragraphs.

Social insurance is distinctly a system that eats up and wastes capital. If it were based on adequate capital and reserves, the premiums would be so high that there would not be enough money in the world to pay them.

It has been proved that State social insurance saps the supply of capital required by private life insurance. A workman with savings of his own can insure his future by insuring his life.

Plan Affords Greater Flexibility

The saving system is not only a systematic accumulation of capital, but it distributes capital in the broadest way all over the nation.

An economic crisis is largely aggravated by the fact that the middle classes suffer most, which means that the consuming power of a broad section of society is impaired.

Under the savings system the larger part of the working population can, within a generation, be raised to the level of middle class

prosperity. But even in the very beginning, when the broad masses notice the growth of their savings accounts, their minds will be imbued with the sense of property ownership and capital formation. Thereby an objective will be set which they will try to reach and which will stimulate their ambition.

This forms the safest bulwark against the encroachment of communistic-socialistic ideas.

Up to Middle Class in One Generation

With a social insurance for wage earners only class distinctions are legally sanctioned and more and more aggravated.

All classes could, up to a certain income and fortune limit, be included in the savings system without there being any danger of a general State pension complex.

One might easily be led to think that in times of great distress, such as the present crisis, the introduction of a savings system would be impossible. If that were so, the establishment of social insurance must be all the more impossible. If millions of unemployed have neither capital nor an income to live on, when hundreds of thousands of members of the middle classes are impoverished, the first endeavor must be to prevent more people from falling to the care of the State, to stop poverty increasing, and to make up for losses sustained with utmost speed.

Unemployment Insurance Not for Idle

If unemployment insurance is not introduced until millions are already out of work, the unemployed cannot be taken care of by the insurance, because, under any insurance system, a claim for an allowance must be preceded by payment of adequate premiums over a stipulated period (six months in Germany). Unemployment insurance is therefore only for those who are still in work but may be unemployed later on.

For the employed there is always the possibility to make deposits against a possible need and thus to erect a bulwark against further demands on public aid. The introduction of social insurance expects exactly the same from them.

Social insurance has taught one good lesson: every one must use part of his earnings to protect his future.

Times of unemployment can be bridged over from earnings and from them only.

Why, people will ask, does Germany after having experienced the great draw-

backs of social insurance, not adopt this system—a system that seems so reasonable and so full of appeal to human nature?

If Germany had no social insurance system, but still had her 50 years of experience in it, she certainly would not adopt social insurance today.

But it would now mean in Germany transforming one system into another. And this is where the difficulty lies.

Irrevocability of Welfare Laws

When a nation has been swayed by a certain law for half a century, this has, be it right or wrong, entered into its mentality and it would be a difficult task to train a nation to another way of thinking.

Added to this, a colossal institution such as the German social insurance is bound up in the State's national and economic life, and, besides, an army of people—direct or indirect—live on it.

And what is more vital still is that millions of old people, of disabled, widows, orphans, cripples, depend for their very existence on the insurances, and that many millions through contribution over decades have gained rights that at any cost must be respected.

Although ways and means for a change might be found, the winding up of the present system would require a very long time—for the annuity insurance it would take years. This is clearly to be seen when we learn that for the covering of existing claims in the annuity insurance,

16,000,000,000 marks are wanting. Payment does of course not fall due today or tomorrow. It extends over a long space of time. But still the means have to be found.

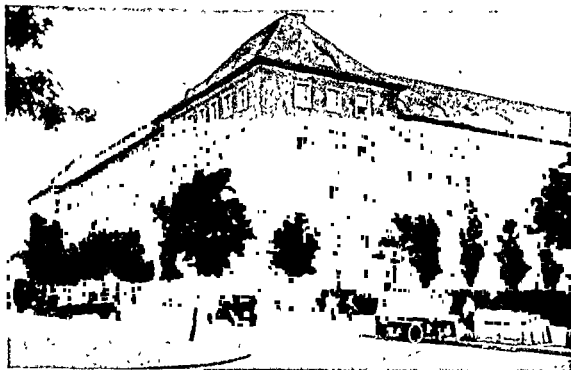
From what has been said here it may be seen that social insurance, once established, is difficult to abolish. This ought to be borne in mind and be a warning to take particular care and consider it well.

Slate Here Comparatively Clean

For a State not burdened with the obligations of social insurance the introduction of the saving system is easy and without any risk, as the State has not to take upon itself the legal obligation to provide for those unable to do so for themselves.

For the new German government the most vital thing was to prop and support the gigantic structure, to prevent its collapse and thereby to safeguard the existence of millions. The Augian stable of corruption has been cleaned and reforms introduced. What the result will be, how matters will further develop, remains to be seen.

One thing however is certain: there is only one State in the world that fights proletarianism among the working classes energetically and purposefully with all ideal means, and in principle shares the opinions expressed here—that is Germany. In what way the ideal and material raising of the proletariat will develop depends on the economic development of the next few decades.



ADMINISTRATION BUILDING OF THE INSURANCE FUND FOR EMPLOYEES, BERLIN

OBSERVATIONS ON ARSPHENAMINE DERMATITIS

With Special Reference to the Reliability of the Patch Test

JAMES W. JORDAN, M.D., AND EARL D. OSBORNE, M.D.

*From the Department of Dermatology and Syphilology, Buffalo General Hospital,
Service of Dr. Earl D. Osborne.*

Most modern authors (Stokes,¹ Moore,² Bloch,³ Wise and Sulzberger,^{4,5} Schoch,⁶ and others) believe that arsphenamine dermatitis represents an allergic phenomenon. As a result of this concept, investigators have attempted to apply skin testing methods, of value in other allergic diseases, to the problem of arsphenamine dermatitis both as a diagnostic procedure and as a guide to further treatment.

The value of such methods is still a debated question. Mook,⁷ in 1920, first attempted to demonstrate hypersensitivity to the arsphenamine in a case of post-arsphenamine dermatitis by the scratch test method, with negative results. Later, Moore and Keidel,⁸ had similar results with the same method. Klauder⁹ obtained positive scratch tests to arsphenamine and neoarsphenamine in a patient who had a contact dermatitis due to handling the arsphenamines and asthmatic symptoms from inhalation of the drug.

Stuart and Maynard¹⁰ were able to demonstrate hypersensitivity to arsphenamine in 2 of 3 cases of post-arsphenamine dermatitis by the intradermal method. Moore, Woo, Gay and Robinson,² using a similar method, found that 70 per cent of patients, who had had a severe post-arsphenamine dermatitis, exhibited hypersensitivity to the drug, and 95 per cent of patients, 18 of 19 cases tested, who were sufferers from hay-fever without any dermatitis, also gave positive tests. Cannon and Karelitz,¹¹ in a recent report, found strongly positive intradermal tests in only 48.7 per cent of cases of post-arsphenamine dermatitis and also obtained positive tests in patients suffering from dermatoses other than arsphenamine dermatitis.

Work has also been done on cutaneous reactions to patch tests with the arsphenamines. Chargin, Sulzberger, and Crowley,¹² using patch tests of 10 per cent neutralized arsphenamine, found that of 210 syphilitics with no dermatitis, 17 per cent reacted positively, and of 293 normals, 21 per cent reacted. Only approximately 2 per cent of this entire group gave strong

positive reactions. They were unable to establish any relationship between the positive tests in syphilitics and the development of arsphenamine dermatitis when the drug was later administered.

Schoch,¹³ using a 33⅓ per cent neoarsphenamine solution, tested 50 syphilitics, 46 normals and 4 persons who had had a previous severe arsphenamine dermatitis. Only the 4 persons who had had a dermatitis reacted with strongly positive tests.

Later, Schoch⁶ reported 8 cases of post-arsphenamine dermatitis of varying grades of severity. Four of the 8 gave strongly positive patch tests to 33⅓ per cent neoarsphenamine and upon further administration of small doses of the drug developed mild recurrences of cutaneous symptoms. The remaining 4 gave negative tests. Further administration of the drug was tolerated without incident. On the basis of these observations, Schoch strongly recommended the patch test method to determine if further treatment with arsenicals could be safely attempted.

Moore,¹⁴ in his recent textbook commenting on Schoch's work, states that he has seen negative patch tests in patients known to have cutaneous intolerance to the intravenous administration of the arsphenamines.

Through the work of these investigators, it is apparent that scratch tests and intradermal tests are of limited value in determining the existence of a state of cutaneous allergy to arsphenamine products. Tests may be negative when cutaneous intolerance exists or nonspecific positive tests may be obtained in the absence of dermatitis. The intradermal test has furthermore been frowned upon because of the possibility of inducing a state of cutaneous allergy where none previously existed. Frei,¹⁵ Sulzberger,¹⁶ and others have been able to produce cutaneous allergy in guinea pigs by intradermal injections of arsenical preparations. The value of patch tests is subject to controversy. Schoch strongly recommends the method. Moore feels that it is not a safe method in determining the existence of cutaneous allergy.

Materials and Methods

The present study was made of 12 patients who had had post-arsphenamine dermatitis of varying degrees of severity and of 135 patients under active treatment for syphilis who had shown no cutaneous intolerance to the drug. Patch tests of 33⅓ per cent neoarsphenamine were applied to the inner side of either arm and allowed to remain *in situ* for 24 hours. Readings were made at the time the tests were removed and at the end of 72 hours. Only strongly positive reactions were considered significant. Tests were considered strongly positive when the test site showed erythema and vesiculation. All of the patients who had shown previous evidence of cutaneous intolerance to arsenicals were placed on gradually increasing amounts of arsphenamine or silver arsphenamine in an attempt to discover, first, whether cutaneous intolerance to the drug persisted and, second, if the intolerance was accurately foretold by patch test methods. The 135 patients who had not had a previous cutaneous accident were permitted to continue antisyphilitic treatment regardless of patch test findings. It was found convenient to divide the patients into four groups and to summarize their findings in Charts I to III.

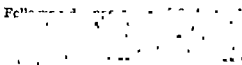
Chart I summarizes the findings of 5 patients who had had a severe arsphenamine dermatitis of three weeks' to two months' duration.

Chart II summarizes the findings of 7 patients who had had a mild arsphenamine dermatitis of two days' to two weeks' duration.

Chart III summarizes the findings in 5 cases found to have strongly positive patch tests out of the group of 135 patients tested. These patients, at the time the tests were applied, were under routine treatment for syphilis and none had had an arsphenamine dermatitis.

The accompanying charts demonstrate that the patch test is not a reliable guide to further treatment with the arsphenamines following an arsphenamine dermatitis. First, tests may be negative or only faintly positive when cutaneous intolerance to the arsphenamines exists (Chart I, cases 3, 4, 5). The explanation for this is not clear. It is generally believed that when a dermatitis is eczematoid in character the epidermal cells themselves are sensitized and perhaps also the blood vessels of the upper corium (Bloch,³ Wise and Sulzberger,⁴ Sezary and Mauric²⁰). It is logical to expect an allergic reaction (positive patch test) when the antigen in sufficient amounts is brought in contact with the sensitized epidermal cells. It has been pointed out by Wise and Sulzberger that this is the case in analogous drug eruptions, *i.e.*, quinine, formalin, etc., where the sensitizing substance has been taken internally and the antigen carried along by the blood stream to sensitized

CHART I—ARSPHENAMINE DERMATITIS

Cases 1-5			Severe Types — Vesicular				
Case	Age	Sex	Treatment before onset of dermatitis	Type of dermatitis	Duration	Patch test	Remarks
1	43	M	13 arm injections Drug? Dose?	Severe vesicular	2 months	1 yr. later, strongly pos	 0.3 gm. by error. Recurrence severe dermatitis
2	52	F	1 arm injection Drug? Dose?	Not seen	6 weeks	4 yrs later, strongly pos	Given 1 inj arsph. 0.009 gm. Caused mild generalized erythema with itching.
3	33	F	6 injections arsph. 0.3 gm.	Severe vesicular	1 month	2 months later, neg	Given 1 inj arsph 0.009 gm. Caused mild generalized papulovesicular dermatitis
4	19	F	3 injections arsph. 0.3 gm.	Severe vesicular	1 month	2 yrs later, slightly pos.	Given 1 inj arsph 0.1 gm. Caused mild generalized papulovesicular dermatitis
5	17	F	2 injections arsph. 0.2 gm.	Moderate vesicular	3 weeks	6 mo later, negative	Given 1 inj. arsph. 0.3 gm. Caused generalized moderately severe dermatitis.

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The value of such methods is still a debated question. Mook,⁷ in 1920, first attempted to demonstrate hypersensitivity to the arsphenamine in a case of post-arsphenamine dermatitis by the scratch test method, with negative results. Later, Moore and Keidel,⁸ had similar results with the same method. Klauder⁹ obtained positive scratch tests to arsphenamine and neoarsphenamine in a patient who had a contact dermatitis due to handling the arsphenamines and asthmatic symptoms from inhalation of the drug.

positive reactions. They were unable to establish any relationship between the positive tests in syphilitics and the development of arsphenamine dermatitis when the drug was later administered.

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8 mos. later, negative	Given 7 inj. arsph. 0.3 gm. No recurrence of dermatitis.
4 mos. later, negative	Given 4 inj. arsph. 0.05, 0.05, 0.1 gm., 1 inj. silver arsph. 0.2 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.
8 yrs. later, negative	Given 4 inj. arsph. 0.2 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.
1 yr. later, negative	Given 5 inj. arsphenamine 0.3 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.

9	25	M	10 injections arsphenamine 0.3 gm.	post-arsphenamine	Short
10	44	F	3 injections arsphenamine 0.3 gm.	Erythema	3-4 days
11	28	F	3 injections arsphenamine 0.25 gm.	Erythematopapular	1 wk.
12	20	F	6 injections silver arsphenamine 0.2 gm.	Erythema	3-4 days

CHART III.—NO ARSPHENAMINE DERMATITIS

Cases 13-17			Routine Treatment Cases—No Dermatitis—Strongly Positive Patch Test 5 Positive Out of 135 Tested		
Case	Age	Sex	Arsenical treatment before patch test applied	Patch test	Remarks
13	39	F	14 inj. arsph. 0.3 gm. 2 inj. silver arsph. 0.3 gm.	Strongly positive	No arsenical drugs since.
14	47	F	8 inj. sulpharsph. 0.25 gm.	Strongly positive	No arsenical drugs since.
15	50	F	None	Strongly positive	Given 4 inj. neoarsph. 0.25 gm. No dermatitis.
16	21	F	1 inj. arsph. 0.3 gm.	Strongly positive	Given 6 inj. arsph. 0.3 gm. No dermatitis.
17	42	M	None	Strongly positive	Given 2 inj. neoarsph. 0.1 and 0.3 gm. Mild dermatitis followed second dose.

impurities may occur. Moore, Woo, Gay, and Robinson,² and Schamberg and Wright²¹ cite this possibility. Following out this line of reasoning, we have tried patch-testing some patients who have recovered from an arspenamine dermatitis, with 2 per cent phenol, anilin oil, and a sulphonated oil, with a positive test to sulphonated oil in one instance. Considerably more work must be done on this phase of the subject before any conclusions can be reached.

The second point to consider is the occurrence of positive patch tests in patients with no cutaneous intolerance to the subsequent intravenous administration of the arspenamines. This is more readily explained. A definite threshold amount of antigen seems necessary to produce an allergic response. This amount may vary considerably in individual cases. The amount of neoarsphenamine reaching any given area of cells, when $33\frac{1}{4}$ per cent neoarsphenamine is applied externally for 24 hours, is probably far greater than when the drug is administered by the intravenous route. The occurrence of positive patch tests in the 4 cases out of 135 tested (Chart III) can only be interpreted as an epidermal hypersensitivity, yet the threshold of reaction in these cases is probably too high to be reached by therapeutic doses of the arsenicals administered intravenously.

Charts I and II demonstrate a decided difference in response of patients to further treatment with the arspenamines. As Ffrench,²⁷ Moore and Keidel,⁸ and others have pointed out, there seem to be two main types, the severe vesicular and the mild erythematous or erythematopapular. The severe vesicular form appears to be a definite sensitization to arspenamines or products of their metabolism, but a satisfactory explanation of the milder forms is wanting. They appear wholly unrelated to the severe vesicular types and do not, as shown, contra-indicate further treatment with the arspenamines. Further, they do not appear to represent sensitization phenomena to the arspenamines or the products of their metabolism because subsequent administration of arspenamine is well tolerated. Such cases should be differentiated from the severe forms in which further treatment with the arspenamines is usually unsuccessful. Isolated severe crises have been subsequently treated successfully and Cannon and Kare-

litz¹¹ have had some success with desensitization.

On the basis of the above facts, it is difficult to place any confidence in patch tests as a guide to further arspenamine therapy. The question arises, if skin testing methods are not reliable, how may one differentiate a severe form of sensitization dermatitis in the early stages from one of the benign types? We believe the only satisfactory method is that proposed by Moore and Keidel⁸ who suggested the use of gradually increasing doses of arspenamine or neoarsphenamine starting with 0.01 gm neoarsphenamine or 0.005 gm arspenamine.

Case 1 and Case 17 (Charts I and III) deserve special comment. Case 1, following recovery from the initial attack of arspenamine dermatitis, was given 15 cc of bismocymol intramuscularly. Three days later he developed a generalized dermatitis which lasted about six weeks. Patch tests with the bismocymol were negative. Analysis of the preparation administered revealed only the slightest trace of arsenic. The patient later took 25 injections of bismuth salicylate without further incident. Russell¹⁷ has recently analyzed several bismuth preparations for their arsenic content. He found very slight traces in most of the specimens examined. Cannon and Karelitz,¹¹ and Schoch⁶ report similar cases. The former authors' patient, following recovery from arspenamine dermatitis, proved intolerant to both a mercury and bismuth preparation. Schoch's case developed upon the injection of a bismuth preparation. Schoch believes his case was due to the use of a syringe contaminated with arsenic. We feel that our case was due to neither the use of a contaminated syringe nor to the small amount of arsenic present in most bismuth preparations. This patient was later able to tolerate 0.0004 gm of arspenamine which is considerably more arsenic than Russell found in any preparations that he analyzed. The question arises in this case, whether sensitization to one substance may temporarily produce a polyvalent sensitivity and, for a time, cause a patient to react to other substances of like molecular structure such as the benzene ring.

Case 17 is of interest because the patient had never received any arspenamine preparations prior to the application of the patch test. The patient developed a

epidermal cells. Furthermore, there are numerous reports in the literature incriminating quinine,²¹ codein,²² opium,²³ and other drugs of producing a superficial eczematoid dermatitis from ingestion of the drug in question with subsequent positive patch tests (application of antigen to sensitive cells). Sulzberger and Lewis²⁴ have demonstrated positive patch tests with trichophytin in cases presenting epidermophytids. This is another instance of a blood-born antigen producing an eczematous eruption in which the cutaneous allergy is demonstrable by applications of the antigen from without. Therefore, it is logical to expect a positive patch test where a true cutaneous allergy is present to the arsphenamine molecule. If a positive patch test does not occur, there cannot be

a cutaneous allergy to the arsphenamine molecule. An explanation of this phenomenon may possibly be the phenolic nature of the arsphenamine molecule. The first step in the manufacture of arsphenamine is the fusion of anilin oil with arsenic acid. Cutaneous intolerance is commonly encountered in drugs of the anilin series of which phenols are a part. Kolmer²⁵ states that there are a great number of intermediate compounds formed between arsphenamine, as it is injected, and arsenic as it is stored and eliminated. We know little as to the fate of these organic compounds in the body. Impurities are also present in all arsphenamines such as sulphites, methyl alcohol, ether, etc. It is therefore theoretically possible that sensitivity to any of these split products or

CHART II.—ARSPHENAMINE DERMATITIS

Cases 6-12					Mild Types — Erythematous — Erythematopapular		
Case	Age	Sex	Treatment before onset of dermatitis	Type of dermatitis	Duration	Patch test	Remarks
6	20	M	5 injections arsphenamine 0.4 gm.	Erythema	4-5 days	4 yrs. later, strongly positive to 1:250 arsph.	Given 12 inj. arsph. Dose ranging from 0.004 to 0.4 gm. No recurrence of dermatitis.
7	22	M	8 injections arsphenamine 0.4 gm.	Erythematopapular	1 wk.	1 wk. later, negative	Given 16 inj. arsph. 0.3 gm. No recurrence of dermatitis.
8	24	F	24 injections arsphenamine 0.3 gm.	Erythema	2 wks.	16 mos. later, negative	Given 7 inj. arsph. 0.2 gm. No recurrence of dermatitis.
9	25	M	4 injections arsphenamine 0.3 gm.	Erythematopapular	Short	8 mos. later, negative	Given 7 inj. arsph. 0.3 gm. No recurrence of dermatitis.
10	44	F	3 injections arsphenamine 0.3 gm.	Erythema	3-4 days	4 mos. later, negative	Given 4 inj. arsph. 0.05, 0.05, 0.1 gm., 1 inj. silver arsph. 0.2 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.
11	28	F	3 injections arsphenamine 0.25 gm.	Erythematopapular	1 wk.	8 yrs. later, negative	Given 4 inj. arsph. 0.2 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.
12	20	F	6 injections silver arsphenamine 0.2 gm.	Erythema	3-4 days	1 yr. later, negative	Given 5 inj. arsphenamine 0.3 gm. No recurrence of dermatitis. Treatment stopped because of gastro-intestinal reactions.

CHART III.—NO ARSPHENAMINE DERMATITIS

Cases 13-17			Routine Treatment Cases — No Dermatitis — Strongly Positive Patch Test			
			5 Positive Out of 135 Tested			
Case	Age	Sex	Arsenical treatment before patch test applied	Patch test	Remarks	
13	39	F	14 inj. arsph. 0.3 gm. 2 inj. silver arsph. 0.3 gm.	Strongly positive	No arsenical drugs since.	
14	47	F	8 inj. sulpharsph. 0.25 gm.	Strongly positive	No arsenical drugs since.	
15	50	F	None	Strongly positive	Given 4 inj. neoarsph. 0.25 gm. No dermatitis.	
16	21	F	1 inj. arsph. 0.3 gm.	Strongly positive	Given 6 inj. arsph. 0.3 gm. No dermatitis.	
17	42	M	None	Strongly positive	Given 2 inj. neoarsph. 0.1 and 0.3 gm. Mild dermatitis followed second dose.	

18. Stokes, John H.: Discussion of Paper by Cannon and Karelitz, *Arch. Dermat. and Syph.* 29: 519, 1934.
 19. Harrison, L. W.: Critical Review of the Treatment of Syphilis, *Quart. Jour. Med.* 10: 291, 1917.
 20. Szary, A., and Mauric, G.: Le rôle de L'allergie cutanée dans la pathogénie de L'érythrodermie visculo-œdémateuse arsenicale, *Presse méd.* 41: 113, 1933.
 21. Finch, M. S.: Case Report, *Trans. Chic. Dermat. Soc.* Jan. 15, 1930. *Arch. Dermat. and Syph.* 22: 336, 1930.
 22. Schen, Max, and Keil, Harry: The Skin Eruptions of Codeine, *J.A.M.A.* 102: 908, 1934.

23. Heller, N. B.: Acute Dermatitis Due to Opium Preparations, *Arch. Dermat. and Syph.* 24: 417, 1931.
 24. Sulzberger, M. B., and Lewis, G. M.: Trichophytin Hypersensitiveness Demonstrated by Contact Tests, *Arch. Dermat. and Syph.* 22: 410, 1930.
 25. Kolmer, W. B.: Chemotherapy with Special Reference to the Treatment of Syphilis, Saunders & Co., Philadelphia, 1926. Pp. 591-593.
 26. Shamberg and Wright: Treatment of Syphilis, D. Appleton Co., New York, 1932, p. 282.
 27. Fienrich, E. G.: Exfoliative Dermatitis Occurring During Arsenical Treatment, *Lancet* 1: 1262, 1920.

CASE REPORT:

INFLUENZA BACILLUS MENINGITIS WITH RECOVERY

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ABSTRACT

The mortality in influenza bacillus meningitis is so high that it is a matter of interest when a patient suffering from it recovers. This case is one of particular interest because the meningitis was complicated by diabetes mellitus and by the development during the course of the disease of pachymeningeal hemorrhage and of spinal subarachnoid block.

J. K., aged 47, admitted to Bellevue Hospital May 8, 1934, in a semi-stuporose state, complained of severe frontal headache and vomiting. The onset of these symptoms was rather sudden, four days prior to admission to the hospital. For the past year he was known to have diabetes mellitus for which he was treated with diet but not with insulin. Eight years ago he sustained a fractured skull.

The physical examination on admission showed a markedly obese patient in a semi-stuporose state from which he could be aroused. The temperature was 101.6°F. and the pulse 102. The respirations were Kussmaul in type. The skin was markedly flushed particularly over the face and neck. There was pronounced nuchal rigidity and generalized hyperreflexia. The Brudzinski sign was positive, but the Kernig negative. There was a positive Oppenheim on the right. There was also a right internal strabismus.

A spinal tap performed on the same day yielded a cloudy fluid under increased pressure. There were 12,380 cells, mostly polymorphonuclears. The albumin and globulin were each, 3 plus, and sugar was absent. Gram negative cocco-bacilli were found on smear but not on culture. After removal of the fluid, 20 c.c. of antimeningococcic serum was injected intraspinally.

As the urine showed 3 plus sugar and a trace of acetone, the patient received shortly after admission 20 units, and an hour later another 10 units of insulin. His urine then showed only a small trace of sugar but no acetone. Thereafter the diabetes was well controlled by employing a relatively high

carbohydrate diet and moderate doses of insulin.

May 9.—The spinal tap yielded 45 c.c. of purulent fluid which showed the gram negative cocco-bacilli on smear but not on culture. 20 c.c. of antimeningococcic serum was given intraspinally. The clinical picture was unchanged. The white blood count was 17,200 with 72 per cent polymorphonuclears and 28 per cent lymphocytes. The blood sugar was 200 and the non-protein nitrogen 30 mgms. per 100 c.c. The Wassermann was negative.

May 10.—The spinal fluid was still purulent, showed 2 plus albumin and globulin and 1 plus sugar. The gram negative cocco-bacilli were not found on smear but were present in the culture. 20 c.c. of antimeningococcic serum was again injected intraspinally. The blood culture was negative.

May 11.—The spinal fluid obtained on this day showed the presence of organisms both on smear and culture. There was however only 1 plus albumin, globulin, and sugar. Antimeningococcic serum was again administered intrathecally.

May 12.—The spinal tap yielded 50 c.c. of cloudy fluid which showed 3 plus albumin and globulin and 1 plus sugar. Both the smear and culture showed the presence of organisms which were definitely identified as influenza bacilli. At this time 20 c.c. of anti-influenza serum was injected intraspinally and 60 c.c. intravenously. Following the intravenous serum administration the patient had a severe reaction, which was promptly relieved by the use of adrenaline hypodermically.

May 13.—The spinal fluid was slightly bloody and xanthochromic, and showed 3 plus albumin and globulin but no sugar. The smear was negative but the culture positive for the influenza bacillus. The patient received 20 c.c. of anti-influenza serum intraspinally and 60 c.c. intravenously.

May 14 and 15.—The spinal fluids obtained on these days were cloudy and xanthochromic,

and showed the presence of organisms on smear and culture. On each of these dates, 20 c.c. of anti-influenzal serum was administered intraspinally and 60 c.c. intravenously. In spite of the active treatment there was no improvement in the patient's condition. The signs of meningeal irritation were pronounced and the temperature ranged between 101° and 104°F. Repeated blood cultures remained negative.

On May 16, the patient developed an extensive serum rash. The spinal fluid remained xanthochromic with 3 plus albumin and globulin and 1 plus sugar, and was positive for the influenza bacillus both by smear and culture. 20 c.c. of anti-influenzal serum was injected intraspinally, but the intravenous use of the serum was discontinued.

From May 17 to 24 inclusive the patient's condition was very bad. He appeared very toxic and at times was irrational. The temperature varied between 101° and 103°. Spinal taps were performed daily, followed by the intraspinal administration of anti-influenzal serum. The fluid in each instance was xanthochromic, contained large amounts of albumin and globulin and a small trace of sugar, and showed the presence of organisms on culture.

On May 25, the temperature dropped to 100°F., but the signs of meningeal irritation with clouding of the sensorium persisted. The spinal tap yielded only 11 c.c. of yellow fluid which showed a large coagulum on standing. On examination the fluid showed 4 plus albumin and globulin, 1 plus sugar and was negative for organisms. No serum was administered.

The spinal fluids obtained on May 26 and 27 remained negative for organisms, but were xanthochromic and coagulated on standing. Anti-influenzal serum was administered after removal of the fluid in each instance. From 3 to 5 c.c. of fresh human complement was added to the serum each time.

On May 28 and 29, only 3 to 4 c.c. of xanthochromic fluid could be obtained by lumbar puncture each time. While the temperature was only 100°F., and the spinal fluids remained sterile, the mental state became distinctly worse. In addition to the semi-stupor there was generalized twitching and irregular breathing of the Biot type. It was now felt that there was a definite spinal subarachnoid block, which raised the intracranial tension. This impression was confirmed by the cisternal tap, which yielded 40 c.c. of xanthochromic fluid under increased pressure. The fluid was negative for organisms. No serum was given this time.

The following day a decided change for the better occurred. The temperature fell to normal. The breathing was regular and the pulse of good quality. Mentally, the patient appeared brighter.

From this time on the patient continued to show progressive improvement. Several more spinal taps were done for relief of pressure. On examination these fluids were still xanthochromic with large amounts of albumin and globulin, and normal sugar, and were negative for organisms. With the exception of moderate neuritic pains in the legs he made a good recovery.

Comment

This case is recited in detail in order to illustrate some interesting and important points. This was by far the most severe form of the disease and yet did not result in death. It is my impression that the use of anti-influenzal serum and repeated spinal drainage were both important factors in this patient's recovery. On the other hand, I do not feel that the addition of small quantities of complement on May 26 and 27 had any bearing on the outcome, as a definite improvement had already occurred in the clinical picture and the spinal fluid was sterile on May 25. The appearance of bloody and xanthochromic fluid on May 13 was probably due to a meningeal or pachymeningeal hemorrhage. Neal, Jackson, and Appelbaum¹ have already called attention to the frequent occurrence of superimposed pachymeningeal hemorrhages in cases of meningitis complicated by constitutional disease, particularly diabetes or syphilis. It seems to me there can be little doubt that a partial spinal block developed later in the course of disease, as indicated by the character of the fluid and the aggravated condition of the patient on May 28 and 29. The striking improvement following the cisternal tap was gratifying.

The various aspects of influenza bacillus meningitis were recently discussed in detail by Neal, Jackson, and Appelbaum.² In that study it was pointed out that this form of meningitis is essentially a disease of young children and that it is caused by strains of influenza bacilli that tend to fall in one group. Particular attention was called to the frequent presence in this disease of bacteremia and toxic degenerative changes in the viscera. With regard to therapy it was stressed that at present there is no adequate method of treatment. However, the early use of the specific serum intravenously as well as intraspinally was advised. It was also suggested that further research should be done toward the development of a more potent serum with high antitoxic as well as anti-bacterial properties.

50 WEST 96TH STREET

References

1. Neal, J. B., Jackson, H. W. and Appelbaum, E.: *Infections of the Central Nervous System*, p. 442. The Williams and Wilkins Co., Baltimore, 1932.
2. Neal, J. B., Jackson, H. W. and Appelbaum, E.: *Meningitis Due to the Influenza Bacillus of Pfeiffer (Hemophilus Influenzae)*, *J. A. M. A.*, 102, 513 (Feb.), 1934.

ON FINDING TUBERCLE BACILLI

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LOOMIS

With the discovery by Robert Koch in 1882 of the tubercle bacillus as the sole and only cause of tuberculosis, the finding of this bacterium in suspected material became of primary importance and today is a valued function of those clinical laboratories devoted to public health work. The rather crude staining methods of Koch were shortly superseded by the more adequate technic of Ziehl and Neelsen, whose stain is still the method of choice of most laboratories.

The direct examination in which a small piece of suspected material (sputum) is smeared, stained, and examined microscopically is a well-known and useful procedure. This method is still considered adequate by many, but its limitations are obvious. Bacilli are usually not distributed evenly throughout the whole mass of the sputum sample so that this is a sort of "hit or miss" method dependent largely on the skill of the laboratory man in selecting the most likely small portion for examination. Negative results may be obtained when the truth is otherwise.

If one, however, reduces or compresses the insoluble part of the sputum to a small bulk much will be gained and this can be readily achieved by the so-called concentration methods. Briefly these consist in digesting and liquefying *large* amounts of sputum, centrifuging at high speed, and the direct microscopic examination of the sediment obtained or a portion of it. Thus is examined either the whole specimen or a cross section of it, depending on the amount of sediment. For the purpose of digestion the sodium hydroxide method suggested by Petroff¹ yields satisfactory results and is the one used in this report. Sodium hydroxide, in low concentration does not materially affect the staining qualities of the tubercle bacillus, and in most instances the sputum is readily liquefied by it, if kept warm. Shaking hastens the process. The hydroxide is used in 1 per cent or 3 per cent strength in freshly distilled water, combined with equal parts of sputum.

With the weaker dilution one may safely

leave the mixture in the incubator over night; with the stronger usually one-half an hour is adequate. Very gummy sputums may require 2 volumes of hydroxide for digestion. The digested mass is then neutralized with dilute sulfuric acid, centrifuged for 20 minutes or more at good speed, and the sediment examined. The use of dilute acid adds more water, which is a desideratum. The smears obtained will appear quite "dirty" when contrasted with the direct smear, as all insoluble substances in the sputum have been thrown down, mostly ordinary dust, carbon particles, and sometimes food granules.

In the results to be reported the Ziehl-Neelsen stain for tubercle bacilli was used, but modified after the method of Cooper² by the addition of a small amount of salt to warm carbolfuchsin. The salted stain is kept constantly in the incubator for it precipitates on cooling. Staining is done in the usual manner by gentle steaming and the slide is then permitted to cool thoroughly. This is important for the precipitation resulting increases the penetration of the dye and the bacilli seem better stained than when plain carbolfuchsin is used.

For decolorization one has the choice of the usual acid alcohols or dilute sulfuric acid; 15 per cent sulfuric acid and no alcohol was used. Alcohol in itself may decolorize some (young) bacilli, nevertheless hydrochloric acid in alcohol has had wide use. Nitric acid, when old, may be partly changed to nitrous acid which decolorizes even tubercle bacilli. Smears decolorized with sulfuric acid are not as clean as when acid-alcohol is used.

Even with concentration there may be bacilli present which we do not detect, for at least 5,000 bacilli per cubic centimeter of material must be present in any smear before bacilli can be readily seen with the microscope. One observer finds the number as high as 100,000 per cubic centimeter. By mixing carefully counted bacilli in varying amounts with bronchiectatic sputum and making stained smears in the usual way, it was rarely found possible to

demonstrate the bacilli microscopically when less than 5,000 per cubic centimeter were present. (See Table I.)

TABLE I

800,000 per c.c. showed	25 in 50 Fields.
100,000 " " "	5 " "
10,000 " " "	2 " 250 "
1,000 " " "	1 " 500 "
100 " " "	0 " 500 "

This method is not entirely accurate for some of the bacilli may have been washed off in staining, but it clearly and conservatively demonstrates the limitations of the smear examination. Conversely, from 1 to 5,000 bacilli may be present in a small amount (1 c.c.) of sputum sediment and yet the microscope ordinarily fails to reveal them. A negative sputum report may be entirely contrary to the real fact of the case, a matter of vast importance where a diagnosis or a confirmatory diagnosis depends on the laboratory. Recognizing this inadequacy the problem is how to increase the number of bacilli so they will come within the range of vision or give other evidences of their presence. This may be achieved by inoculating the sediment into the guinea pig, by culturing the sediment on media suitable for the growing of rare bacilli, or by doing both when there is sufficient material.

The guinea pig is for all practical purposes a vital culture, self-heating, and of an assured composition, but it has to be fed and is subject to the usual vicissitudes of laboratory animals. Nevertheless, it has long been successfully used for detecting the presence of tubercle bacilli and it is only recently that its preëminence has been questioned. For inoculation, the sputum has to be concentrated as for microscopic examination.

To avoid injuring the bacilli by too long an exposure to sodium hydroxide, the sputum is treated with the 3 per cent strength for not over 30 minutes. After neutralization and centrifuging, the sediment is diluted and inoculated in the groin of a guinea pig. Besides liquefying the sputum the hydroxide destroys or renders inert most of the contaminating bacteria present so that the animal only rarely succumbs to any of these organisms, and is killed when the intradermic tuberculin test (10 per cent O. T.) becomes definitely positive or at the end of three months. The presence of the characteristic lesions

of the disease and the finding of tubercle bacilli in crush smears from these lesions makes the presence of tuberculosis unquestionable. The continued absence of tuberculin sensitiveness (unless the pig is moribund) unfailingly denies the presence of tuberculosis.

A recent examination of our records shows that nearly 50 per cent of the patients coming to the Loomis Sanatorium with a microscopically negative sputum are thrown into the positive group by the method of inoculation. This speaks well for the diagnostic acumen of the examining physician and for the exquisite sensitiveness of the guinea pig.

Formerly it was taught that tubercle bacilli were hard to grow from contaminated material such as sputum, but with newer methods of preparation of material and improved media such isolation is now relatively easy. The sputum may be treated with 3 per cent sodium hydroxide exactly as for concentration, or when very badly contaminated, with dilute sulfuric acid as recommended by Corper.³

Sterile glassware should be used throughout and centrifuge tubes covered with sterile rubber caps. The usual aseptic technic for culturing should be carefully observed. Adequate centrifuging packs the sediment and facilitates its culturing. Egg or potato, with glycerin, have long been used for growing tubercle bacilli. The medium used in this report was a combination of these materials and was made exactly as previously described⁴ except that malachite green was added to make a final concentration of 1 to 2,000 instead of crystal-violet. The potato-egg medium is not difficult to make, keeps well, and is remarkably sensitive. Rare bacilli will grow as well on this medium as on the more complex media of Löwenstein⁵ and Petragnani⁶ with which it has been compared. It is definitely superior to the potato-cylinder medium.⁷

In an experiment in which 47 sputum sediments were tested both by culture on this medium and with animal inoculation, the culture tubes gave 4 positives when the animals were negative (see Table II) and

TABLE II.—CULTURE VS. INOCULATION

Number of sputums	Positive on culture	Positive on G. pig	Pos. on G. pig only	Pos. on culture only	Total positives
47	24	20	0	4	50%

in each instance the bacilli obtained proved to be virulent. Either 20 tubes were seeded with two loopfuls or 10 tubes with 4 loopfuls of sediment for each specimen. The results are all the more remarkable when one realizes that the guinea pig received the balance of the sediment which, in most instances, was many times greater than the amount cultured. The apparent superiority of the culture tube may lie in the fact that the natural forces of resistance of the animal are capable of destroying some of the bacilli whereas such forces are not operative in the test tube. Until sputum culture becomes more universal, either method should be considered adequate.

Guinea pig inoculation is easier than culturing, for it requires less skill and less careful preparation of material. Another advantage is that the animal can receive much more material than is usually convenient to culture and this assures a heavier seeding in the guinea pig than is possible in the culture tube. Materials contaminated with yeast and fungi had better be given animal inoculation as the ordinary alkaline or acid treatment will not destroy these organisms. The disadvantages of the animal are the cost, which includes care, housing, and feeding, the possibility of intercurrent disease, and the fact that guinea pigs do not usually show positive signs of tuberculosis before one month after inoculation.

The culture method requires the service of a skilled technician, one capable of marking and using the medium. The cost of material is negligible and the medium keeps well. One great advantage of the culture method is that positive results can be read much sooner than when inoculation is done. The earliest positive sputum culture was obtained (visible growth) in 8 days. The average time is 18 days. The longest time before a growth occurred was 56 days. The greatest drawback to culturing is the occurrence of contamination. This is not remarkable when one considers what almost putrid material has at times to be utilized. Thoroughness in the preparation of material and proper sealing of the culture tubes will largely eliminate this difficulty and the culture tube should give results equal in every respect to animal inoculation.

The methods outlined above can be utilized in the examination of many other materials for tubercle bacilli. Purulent dis-

charges from the ear, nodes, fistula, and so on, readily lend themselves to digestion and concentration. Pleural fluid, being already liquid only needs prolonged centrifuging before examining. If the fluid is contaminated with other bacteria, the sediment is treated with sodium hydroxide or sulfuric acid before culturing or inoculation. Urine is allowed to settle and the sediment further concentrated by centrifuging. Urine sediment must be treated before inoculation or culture as it is rarely free from contamination. With pleural fluids, prolonged centrifuging is often the key to success. Primary fluids should have sodium citrate added to prevent clotting. The large electric centrifuge is only second to the microscope as an aid to diagnosis, it is a laboratory necessity.

Thus a "certified" diagnosis as regards the presence or absence of tubercle bacilli in any specimen is arrived at. The results represent the best efforts using generally accepted methods. Failures are more apt to be due to improperly obtained specimens than to an actual missing of the bacilli. Repeated examinations may have to be made.

Methods

For sputum examination the Loonius Sanatorium practice is as follows with new patients: (1) Four ounce wide mouth bottle (sterile and new) issued. (2) This must be kept until one ounce of sputum is obtained even if this takes three or four days (which is sometimes not possible). (3) A likely portion of sputum must be examined by direct method on new slide. (4) Concentration (if negative). With 3 per cent sodium hydroxide for one half an hour in incubator, neutralization, centrifuging, and staining. This should be done aseptically if future culturing is anticipated. (5) Inoculation or culture of sediment if still negative.

(Where inoculation or culture is not feasible sputum may be concentrated as follows. To one volume of sputum add an equal part of a digesting fluid consisting of 15 gms. of sodium hydroxide and 10 c.c. of trikresol dissolved in 1000 c.c. of freshly distilled water. Shake well and incubate over night. Then add one volume [half of the sputum plus hydroxide] of 0.4 per cent sulfuric acid mix and centrifuge. Stain sediment for tubercle bacilli. The addition of trikresol to the digesting fluid renders the treated sputum non-infectious. This digesting fluid is in effect a 1 per cent sodium hydroxide solution as a part of the hydroxide combines with the cresols.)

Results

Five hundred samples of sputum received consecutively from patients on their admission to the Loomis Sanatorium and examined according to the methods described above are reported on. (See Table III.) Three hundred and sixteen were

TABLE III.—EXAMINATION OF ADMISSION SPUTUMS

Positive smear	Negative smear		Total
316	184		500
↑ 63% 13% →	Pos. Conc. 66	Neg. Conc. 118	
		Pos. Inoc. or culture 55	
11% → 87%	Total Positives →		437

found positive on direct smear (one slide only). When the negative-smear sputums were concentrated, one-third of them (66) were found positive microscopically and of the remainder, 55 turned out to be positive by inoculation or culture; 437 positives out of 500 sputums resulted in all. A diagnosis of tuberculosis was made in approximately 90 per cent of these cases from *only one specimen of sputum*. The vast majority of these patients had recognized tuberculosis. A few were sent for diagnosis and included cases of bronchiectasis,

lung abscess, and other non-tuberculous pulmonary diseases. These amounted to 4 per cent of the total. In some instances the sputum specimens did not equal the required amount, but all were included.

Comment

It is recognized that the making of several direct smears from various portions of any specimen will tend to increase the number of positives. In fact very small sputum specimens may often be adequately examined by direct smear as practically all of the sputum comes under observation by this method. But with larger amounts it is best not to spend too much time on direct examination but to turn to concentration without delay. If tubercle bacilli are microscopically present concentration will show them. The purpose is to find the bacilli as easily and readily as possible. The only excuse for not concentrating sputum is lack of adequate apparatus.

The additional positives obtained by inoculation or culture are sufficient in number to encourage those laboratories engaged in sputum examination to apply the more refined methods of diagnosis. *No sputum can be said to be truly negative unless it has successfully run the gauntlet of microscope and culture or animal.*

References

1. Petroff, S. A.: *J. Exper. Med.* 21: 28, 1915.
2. Cooper, F. B.: *Arch. Path.* 2: 382, 1926.
3. Corper, H. J.: *J. Am. Med. Assn.* 91: 37, 1928.
4. Woolley, J. S., and Petrik, F. G.: *Am. Rev. Tuberc.* 24: 596, 1931.
5. Löwenstein, E.: *Centralbl. f. Bakteriolog.* 120: 127, 1931.
6. Petragani, G.: *Atti d. r. Accad. d. fisiocrit. in Siena* 1: 177, 1926.
7. Pawlowsky, A. D.: *Ann. de l'Inst. Pasteur* 2: 303, 1888.

"I WAS SICK, AND YE VISITED ME"

In New York City alone, approximately 700 visits are made daily to the homes of sick home-relief families by physicians supplied by the Medical and Nursing Service of the Emergency Relief Bureau, according to a report from the State Health Department. This service is part of a statewide program initiated in accordance with the rules and regulations for medical and nursing care adopted by the State Temporary Emergency Relief Administration.

Two years ago when the service was started in New York City, about ten to twenty calls were received daily. In the single month of November, 1934, a total of 17,000 calls were answered.

Describing the way in which free medical care is brought to the homes of the needy

in the city, William G. Terwilliger, M.D., director of the Service, in a recent radio talk said that this care is being rendered at about one-fourth of what it would cost for hospitalization of these patients. Every effort is made to maintain the relationship between family and patient. So far as possible, the regular family physician is sent. At present, 3,000 accredited practicing physicians are enrolled with the Emergency Relief Bureau for the care of home relief families. These physicians are not themselves on relief rolls or employed by the Bureau.

A fee of \$2 for each visit to a home-relief family is paid from emergency relief funds supplied by the federal, state and city governments. Only 25 per cent of the cost is carried by New York City taxpayers.

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EDITORIALS

Emulating Error

Social insurance, and particularly sickness insurance, have two main groups of advocates—politicians who seek to placate or win over the masses and friends of labor who desire to improve its condition. Gustav Hartz, famous German economist, comes within both these classifications. A son of the working classes, he has devoted his life to the advancement of trade unionism. His successful career took him as far as the Reichstag, until unions were abolished by Hitler. When a man of this type examines social insurance and rejects it after a half century of operation, it is because it has failed to fulfill its promise to the worker and the state.

Like most observers, Hartz attributes the development of social insurance to widespread poverty. He does not stop here. From his extensive experience he concludes that "social insurance is not only caused by lack of means" but aggravates it and makes it permanent. The worker, who must contribute a relatively large portion of his small earnings, is rarely able to save and is thus forced into a position of perpetual proletarianism.

If the protection afforded were genuine and substantial, there might be an excuse for this form of benevolent despotism. Unfortunately, this has never been the case. The inability to work out an accurate

actuarial estimate of sickness and unemployment risks makes it difficult, if not impossible, to create adequate financial reserves. At best the benefits provided are "too little to live on and too much for starving." In periods of economic crisis the system is threatened with collapse because of an increased demand for help concomitant with diminishing premiums.

The results of fifty years of sickness insurance in Germany are cited by Hartz as a striking example of the weaknesses of this method. The will to get well has been weakened and malingering is common, with the result that the number of sick days lost from work has multiplied five times, even though health in general has improved all over the civilized world. The excessive demands for service by neurotic and dishonest workers frequently overshadow the needs of the genuinely ill.

It is not to be wondered at if the level of medical care is low. The amounts paid for single services or single patients are so small that the physician is driven to mass practice and forced to subordinate quality to volume. The popular demand for expensive medicines has brought about a strict restriction of the use of drugs; doctors may not prescribe what they think best but what the medical regulations permit.

An extensive supervisory system has completely destroyed the confidential relationship between practitioner and patient. Wedged between the demands of the insured for service and the insistence of the insurers upon economy, the medical man is an object of distrust to both factions.

Hartz does not attack social insurance without proposing a substitute. The system of compulsory savings which he advocates conforms to the views of those who believe that people should meet at least part of the costs of any untoward happening from their own pockets at the time of the emergency. It destroys the incentive to malingering, does not require an expensive administrative bureaucracy, and leaves the worker the possibility of accumulating a small capital for the betterment of his economic status.

While there are undoubtedly valid objections to this proposal, its deficiencies are not nearly as serious nor its potential flaws as costly as those of compulsory insurance. Obligatory savings could easily be combined with the principles of universal medical care favored by the profession. Before the Legislature votes on Senator Byrne's proposal to saddle the people with the incubus of compulsory health insurance—a burden that is more easily assumed than cast off—it should study Hartz's comprehensive analysis of the situation in Germany and consider whether precipitate action is necessary or justifiable.

Fair Claims

Statutory protection of the doctor's right to payment is so nebulous that it has long been taken for granted that the physician need not be paid till very late—if ever. Laborers have a recognized lien upon the structures they erect. Lawyers are frequently in a position to deduct their fees from monies collected. Several acts now pending in the State Legislature would enable physicians to collect their bills in certain circumstances where funds are known to be available.

In many accidents the victims receive substantial awards which are granted, in part, to defray the expenses incurred for

medical care. Frequently the doctors who handle such cases—at the scene of the accident, in hospitals, emergency wards, and their own offices—receive not one penny for their services. The measures sponsored by Senator Byrne and Assemblyman Doyle give them a lien upon any damages awarded.

In death the situation is similar. The undertaker is paid out of the first sums realized on the estate. The physician must depend on the good will of the executors or resort to litigation. The Gamble Act gives the bills of hospitals, doctors, and nurses for services during the deceased's last illness parity with the undertaker's charge.

The legislation cited is fair and reasonable. It does not bestow unique privileges upon the medical profession but abolishes discrimination against it in the matter of securing compensation. The rights of the patient are not prejudiced in any way—but neither is it permitted to impose on the doctor's traditional response to an emergency.

For several years these lien bills have been proposed at Albany, only to fall into the limbo of unreported measures. The current Legislature will probably view the interests of the profession with similar apathy unless physicians and their friends bring the pressure of articulate opinion to bear on it.

Prenatal Medication as a Cause of Deafness

It is difficult to attribute the noticeable increase in the incidence of deafness among school children to any one cause. It is likewise hard to determine whether or not this increase is an actual one or has simply become apparent as the result of our more thorough examination of these children, undertaken in the main, with the view of instituting re-educational measures as early as permissible. The fact remains, however, that otologists are seeing more children in the first decade of life whose hearing has been found impaired in the course of the routine examination by the school physician.

The types of deafness encountered

among these patients show an imposing percentage of nerve deafness. This factor has led Taylor¹ to investigate the possible effect of drugs taken by the pregnant mother upon the hearing acuity of her offspring. It is well known that certain drugs have a predilection for the auditory nerve. Quinine, salicylates, and alcohol can affect the eighth nerve permanently. Since the placenta is permeable to drugs, Taylor feels that medicaments, particularly quinine given to induce labor, may have a definite toxic effect upon the acoustic nerve. Dilling and Gemmell² recovered quinine in the urine of newborn babies whose mothers had been given quinine, this finding in the child was evident as long as twelve hours after the last dose had been taken. King³ was able to recover an appreciable quantity of quinine from the brain of a fetus, whose mother had taken the drug.

It is significant that a census of the schools for the deaf in Florida and Alabama showed that the greatest number of children were born in the period of the year when malaria is most prevalent, and when the use of quinine is greatest. This relationship between deafness and the date of birth was not evident in the census of northern schools for the deaf.⁴

This is a new phase in preventive medicine which deserves the attention of the obstetrician, otologist, biochemist, and pathologist for further study. While cases of progressive deafness, deafmutism and otosclerosis will still be with us, a detailed study of the problem presented by Taylor may go far toward eliminating the cases of poor hearing brought about by the administration of drugs prenatally. Here at last is a ray of light upon one of the darker sides of medicine.

Hormonal Treatment of Prostate Hypertrophy

Tent, the Brussels urologist, lately described certain surgeons as "being more enthusiastic about recommending prostatectomy to others than about undergoing it themselves." Nonoperative treatment is certainly of paramount importance in certain cases. It has long been known that some connection exists between the prostate and testicular function. The prostate atrophies after castration and the restoration of the epithelium of this gland which has previously been damaged by castration in rats has been used for the determination of the potency of male sex hormone. The castration treatment of prostatic hypertrophy is based on similar reasoning. In striking contrast, however, is the fact that pathological enlargement of the prostate is observed at just that age at which we have sufficient grounds for assuming a lowered testicular function. However, it is known that the interpretation as pure hypertrophy is no longer tenable.

Aschoff's textbook of pathology maintains that the true senile prostate is atrophic, and that compensatory hypertrophy follows. On embryological reasoning, it has been shown that this hypertrophy may be regarded as a development toward the female type, exactly in analogy with the postmenstrual masculinization frequently noted in women. Recent experiments have shown that marked changes can be effected in the prostate gland by injection of female sex hormone. Injections of large amounts of crystalline follicular hormone bring about metaplasia of the epithelium of certain parts of the gland, and so an enormous increase in the prostate gland that micturition becomes impossible and the animals die of ascending renal infection. On this reasoning E. Laquer and van Cappellan⁵ in Holland have introduced the treatment of prostatic hypertrophy by the injection of male sex hormone. This is still in the experimental stage, but the successes reported would seem to point to the possibility of very interesting findings in the near future.

¹ Taylor, H. M. Prenatal Medication as a Possible Etiologic Factor of Deafness in the New Born. *Arch Otolaryngol.* 20: 790, 1934.

² Dilling, W. J. and Gemmell, A. A. A Preliminary Investigation of Foetal Deaths Following Quinine Induction. *J. Obst. and Gynaec. Brit. Emp.* 36: 153, 1929. Further Investigations of the Death of the Child Following Induction of Quinine. *ibid.* 37: 528, 1930.

³ King, E. L. Does Quinine in the Induction of Labor Have a Deleterious Effect on the Fetus? *J. A. M. A.* 101: 1145, 1933.

⁴ Heider, F. The Influence of the Epidemic of 1918 on Deafness. A Study of Birth Dates of Pupils Registered in Schools for the Deaf. *Am. J. Hyg.* 19: 756, 1934.

⁵ Van Cappellan. *Deutsch. Med. Woch.* 1934.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

That Problem of the Common Cold

Herkimer, N. Y.

To the Editor:

The common cold deserves all the attention it has been receiving. If the opinion that I have been expressing is correct, science has been using wondrous methods in studying this disease.

In face of the fact that colds, as the experience of everybody attests, are often caught suddenly and in face of the fact that all known infections have a considerable period of incubation it has been tenaciously held that the common cold is caused by germs and is infectious. There is no good reason for saying that the common cold is the only infection that does not have a period of incubation. Is it not safe to say that if the common cold does not have a recognized period of incubation it is not an infection?

When a person is exposed to chilling and is on the point of catching cold he can prevent catching cold by warming his body so that it is normally warm but I do not know of any infection that can be cut short in its development by that method.

The common cold is a distinct entity but there are infections that resemble it. The fact that common colds are prevalent in a household or community does not in the least prove that they are caused by germs and are infectious, for necessarily colds are most prevalent when atmospheric conditions favor their development. At such times people gather indoors and these are the conditions under which infections spread. These mimicking infections and common colds are naturally prevalent at the same time. Furthermore, mucous membranes that are irritated by common colds often become infected by these mimicking infections. These facts cause much of the confusion and difficulty in differentiation and experimentation. Cultures of unknown nature have been used for experimenting and uncertain results have been declared as certain.

The problem of the nature of the common cold has been grossly and ridiculously complicated by including in its category, as forms of colds, diseases that are known to be distinct entities. A recent article in the JOURNAL stated: "For purposes of classification the colds were divided into acute coryza, sub-acute colds, influenza, pharyngitis, and other respiratory infections"!

As for the prevention of colds, it appears that each individual, besides maintaining the best possible general health, should learn the customary limits of exposure beyond which he is apt to catch cold and should try to stay within those limits. Sufficient clothing in cold weather and the avoidance of becoming chilled, especially when sweaty, are the chief preventives.

GEORGE E. BARNES, M.D.

A Correction

COMMITTEE ON ECONOMIC SECURITY

Walker-Johnson Building

1734 New York Avenue NW.

Washington

Committee Members

FRANCES PERKINS
Secretary of Labor, Chairman
HENRY MORGENTHAU, Jr.
Secretary of the Treasury
HOMER S. CUMMINGS
Attorney General
HENRY A. WALLACE
Secretary of Agriculture
HARRY L. HOPKINS
Federal Emergency Relief Administrator

EDWIN E. WITTE
Executive Director

February 19, 1935

Editor,
N. Y. State Journal of Medicine
33 West 42nd Street
New York City

Dear Sir:

My attention has been called to a statement in your issue of February 1 in the section devoted to "Current Comments," to the effect that I was one of the persons who assisted in drafting the health insurance bill of the American Association for Social Security. This is an entirely false statement. I had nothing to do with the drafting of this bill and was not consulted in any manner; in fact, I did not know that such a bill was being prepared until I received a copy thereof.

As your statement put me and this Committee in an entirely false light before your readers, I shall expect you to make prompt correction. Will you kindly send me a copy of such correction?

Very truly yours,
COMMITTEE ON ECONOMIC SECURITY

EDWIN E. WITTE,
Executive Director

[We are glad to have this information and make this correction.—Ed.]

Presidential Message

February 19, 1935

To the House of Delegates and Members of the Medical Society of the State of New York: Greetings!

At a special meeting of the House of Delegates of the American Medical Association held in Chicago on February 15 and 16, 1935, resolutions of great importance were adopted. I ask your serious attention to the report of the Committee which is herewith appended.

It is with great pleasure that I inform you that our delegation took an active part in the proceedings and that our own Nathan Van Etten, the Vice-Speaker of the House, was on the Committee which drew up the general resolutions. During the four sessions every delegate had a chance to express his personal opinion as well as to report the action of his State Society on the important questions involved in the various bills presented to them for critical analysis. It is with the greatest pride in the medical profession of this country that I announce that all decisions were unanimous.

Once again the only association which truly represents organized medicine in the United States, the American Medical Association, has restated its opposition to all forms of compulsory sickness insurance, that there is no real demand for a change in the method of delivery of medical service which has stood the test of time, and that there is every reason to condemn the socialistic schemes which in other countries have proved to be extravagant in cost and unsatisfactory in results.

As President of the State Society I ask each and every one of you to inform your patients of this action and make it clear to all with whom you come in contact that organized medicine stands for the protection of the home in all that pertains to the realm of health, including the prevention and cure of disease.

ARTHUR J. BEDELL, *President*

Report of the Reference Committee—Special Session House of Delegates

February 15 and 16, 1935

Your Reference Committee, believing that regimentation of the medical profession and lay control of medical practice will be fatal to medical progress and inevitably lower the quality of medical service now available to the American people, condemns unreservedly all propaganda, legislation or political manipulation leading to these ends.

Your Reference Committee has given careful consideration to the record by the Board of Trustees of the previous actions of this House of Delegates concerning sickness insurance and organized medical care and to the account of the measures taken by the Board of Trustees and the officials of the Association to present this point of view to the government and to the people.

The American Medical Association, embracing in its membership some 100,000 of the physicians of the United States, is by far the largest medical organization in this country. The House of Delegates would point out that the American Medical Association is the only medical organization open to all reputable physicians and established on truly democratic principles, and that this House of Delegates, as constituted, is the only

body truly representative of the medical profession.

The House of Delegates commends the Board of Trustees and the officers of the Association for their efforts in presenting correctly, maintaining and promoting the policies and principles, heretofore established by this body.

The primary considerations of the physicians constituting the American Medical Association are the welfare of the people, the preservation of their health and their care in sickness, the advancement of medical science, the improvement of medical care, and the provision of adequate medical service to all the people. These physicians constitute the only body in the United States qualified by experience and training to guide and suitably control plans for the provision of medical care. The fact that the quality of medical service to the people of the United States today is better than that of any other country in the world is evidence of the extent to which the American medical profession has fulfilled its obligations.

The House of Delegates of the American Medical Association reaffirms its opposition to

all forms of compulsory sickness insurance whether administered by the Federal government, the governments of the individual States or by any individual industry, community, or similar body. It reaffirms, also, its encouragement to local medical organizations to establish plans for the provision of adequate medical service for all of the people, adjusted to present economic conditions, by voluntary budgeting to meet the costs of illness.

The medical profession has given of its utmost to the American people, not only in this but in every previous emergency. It has never required compulsion but has always volunteered its services in anticipation of their need.

The Committee on Economic Security, appointed by the President of the United States, presented in a preliminary report to Congress on January 17 eleven principles which that Committee considered fundamental to a proposed plan of compulsory health insurance. The House of Delegates is glad to recognize that some of the fundamental considerations for an adequate, reliable, and safe medical service established by the medical profession through years of experience in medical practice are found by the Committee to be essential to its own plans.

However, so many inconsistencies and incompatibilities are apparent in the report of the President's Committee on Economic Security thus far presented that many more facts and details are necessary for a proper consideration.

The House of Delegates recognizes the necessity under conditions of emergency for federal aid in meeting basic needs of the indigent; it deprecates, however, any provision whereby federal subsidies for medical services are administered and controlled by a lay bureau. While the desirability of adequate medical service for crippled children and for the preservation of child and maternal health is beyond question, the House of Delegates deplores and protests those sections of the Wagner bill which place in the Children's Bureau of the Department of Labor the responsibility for the administration of funds for these purposes.

The House of Delegates condemns as pernicious that section of the Wagner bill which creates a social insurance board without specification of the character of its personnel to administer functions essentially medical in character and demanding technical knowledge not available to those without medical training.

The so-called Epstein bill, proposed by the American Association for Social Security, now being promoted with propaganda in the individual States, is a vicious, deceptive, dangerous, and demoralizing measure. An

analysis of this proposed law has been published by the American Medical Association. It introduces such hazardous principles as multiple taxation, inordinate costs, extravagant administration, and an inevitable trend toward social and financial bankruptcy.

The committee has studied this whole matter from a broad standpoint, considering many plans submitted by the Bureau of Medical Economics as well as those conveyed in resolutions from the floor of the House of Delegates. It reiterates the fact that there is no model plan which is a cure-all for the social ills any more than there is a panacea for the physical ills that affect mankind. There are now more than 150 plans for medical service undergoing study and trial in various communities in the United States. Your Bureau of Medical Economics has studied these plans and is now ready and willing to advise medical societies in the creation and operation of such plans. The plans developed by the Bureau of Medical Economics will serve the people of the community in the prevention of disease, the maintenance of health, and with curative care in illness. They must at the same time meet apparent economic factors and protect the public welfare by safeguarding to the medical profession the functions of control of medical standards and the continued advancement of medical educational requirements. They must not destroy that initiative which is vital to the highest type of medical service.

In the establishment of all such plans, county medical societies must be guided by the ten fundamental principles adopted by this House of Delegates at the annual session in June, 1934. The House of Delegates would again emphasize particularly the necessity for separate provision for hospital facilities and the physician's services. Payment for medical service, whether by prepayment plans, installment purchase, or so-called voluntary hospital insurance plans, must hold, as absolutely distinct, remuneration for hospital care on the one hand and the individual, personal, scientific ministrations of the physician on the other.

Your Reference Committee suggests that the Board of Trustees request the Bureau of Medical Economics to study further the plans now existing and such as may develop, with special reference to the way in which they meet the needs of their communities, to the costs of operation, to the quality of service rendered, the effects of such service on the medical profession, the applicability to rural, village, urban, and industrial population, and to develop for presentation at the meeting of the American Medical Association in June model skeleton plans adapted to the needs of populations of various types.

HARRY H. WILSON, M.D., *Chairman*

Society Activities

Committee on Legislation

BULLETIN NO. 6, FEBRUARY 13, 1935

Have you written to your legislators asking them to support the following bills and given them a reason for doing so? If not, do so at once, because they are waiting to hear from you; and have some of your friends outside the profession write them also:

Senate Int. 19; Print 774, N. A. O'Brien, and Assembly Int. 19; Print 957, Kantowski—Medical Abuses Bill.

Senate Int. 208; Print 211, Byrne, Lien Bill. Assembly Int. 461; Print 471, Stewart, Clinical Laboratory Bill.

Assembly Int. 372; Print 380, Doyle, Public Health Council.

Assembly Int. 371; Print 817, Doyle, Physicians' Lien Bill.

The opposition to our Physicians' Lien Bill is extremely powerful. It includes the Bar Association and certain large employers of labor, as the New York Central Railroad Company, and the like. Every letter counts, so write today.

New Bills. Since the issuance of our last bulletin the following bills have been introduced:

Senate Int. 693, Twomey, amending the Mental Hygiene Law by providing no member of board of visitors of any institution in Department shall have financial interest, directly or indirectly, in purchase or use of medicines nor in care and treatment of patients. Referred to the Health Committee. Same as Assembly Int. 978, Alterman.

Senate Int. 706, Wicks, amends Chapter 798, Laws of 1931, relative to Temporary Emergency Relief Administration, by extending emergency period to February 15, 1936, and providing for an additional member of administrative authority who shall be member of State Board of Social Welfare. Same as Assembly Int. 906, Killgrew.

Senate Int. 707, Byrne, adds new section to General Municipal Law for hospitalization of members of city fire departments, cost thereof to be city charge. Referred to the Cities Committee. Same as Assembly Int. 887, Hayes.

Senate Int. 754, Williamson, amends the Surrogate's Court Act, for payment by an executor or administrator, out of first moneys received, of reasonable hospital, physicians, surgeons, and nurses bills. Referred to the Judiciary Committee.

Senate Int. 755, Byrne, amends Chapter 802, Laws of 1934, relative to licensing private or public institutions for care of children, and so on, by providing act other

than sections 3, 4, and 5 shall take effect October 1, 1936. Referred to the Codes Committee.

Senate Int. 787, Byrne, amends the General Corporation Law for acquisition of property by a foreign corporation organized not for profit but exclusively for educational, religious, benevolent, or other like purposes, free of five-year tenure restriction, and making other changes relative to acquisition of property by any foreign corporation. Referred to the Judiciary Committee. Same as Assembly Int. 1063, Moffat.

Senate Int. 792, Feld, amends Chapter 798, Laws of 1931, by defining "home relief" to include shoes, books, carfare, eyeglasses, and other necessities, clothing to be "suitable." Referred to the Relief and Welfare Committee. Same as Senate Int. 577, Feld; Assembly Int. 800, McGrath.

Senate Int. 794, Feld, amends the Education Law and Public Welfare Law by requiring public welfare officials to furnish indigent children with carfares and eyeglasses, and appropriating \$1,000,000. Referred to the Relief and Welfare Committee.

Senate Int. 802, Mandelbaum, amends the Education Law for licensing school psychiatrists, psychologists, medical inspectors, aurists, school psychiatric social workers, and certain other employees of boards of education, and validating certain examinations held and licenses issued. Referred to the Education Committee.

Senate Int. 807, Twomey, amends the Education Law by making unprofessional conduct or fraud and deceit in practice of his profession, grounds for revoking license to practice pharmacy, and prescribing procedure for revoking licenses and registration certificates. Referred to the Education Committee.

Senate Int. 825, Coughlin, adds new section to the Public Health Law, requiring health commissioner to make rules for cleansing and disinfecting public telephone instruments, defacing or depositing in a booth refuse or waste material being unlawful. Referred to the Health Committee. Same as Assembly Int. 1025, Doyle.

Senate Int. 862, Graves, adds new section to the Public Welfare Law for removing a person within a county public welfare district to town or city of his settlement therein. Referred to the Relief and Welfare Committee. Same as Assembly Int. 1024, Daniels.

Senate Int. 869, Fearon, amends the Decedent Estate Law by providing in every action for wrongful act or neglect now or hereafter pending in addition to any other lawful element of damages recoverable, reasonable expenses of medical aid, nursing, and attention incident to injury causing death

and reasonable funeral expenses, shall be deemed proper elements of damage. Referred to the Judiciary Committee. Same as Assembly Int. 1193, Parsons.

We should all approve of this bill and let us do so by writing to our Senators and Assemblymen telling them about it.

Senate Int. 898, Warner, amends the Education Law for medical treatment of pupils within a school hygiene district afflicted with defective sight or hearing or other physical disability, medical inspector having been notified that parents are unable to provide necessary relief. Referred to the Education Committee. Same as Assembly Int. 1157, Marble.

It is estimated that from 4 per cent to 12 per cent of all school children have defective hearing. They are are not deaf, yet some of them hear so little that unless they are sitting in the fore part of the room they will not hear what is said and frequently are classed as dull or indifferent students, until their disability is discovered. The school medical inspectors are reporting the existence of these children at present, but facilities for their care and treatment are lacking.

Assembly Int. 1009, Potter, adds new section to the Lien Law by providing for liens of hospitals for care of persons injured as a result of negligence of other person or corporation. Referred to the Judiciary Committee.

Assembly Int. 1061, Messer, amends the Public Welfare Law by making State responsible for public care of any person having no settlement in any public welfare district, provision that he must not have resided in any district for 60 days during year prior to application being stricken out, and making other changes. Referred to the Relief and Welfare Committee.

Assembly Int. 1106, DiFede, amends the Education Law relative to misbranding drugs where package fails to bear statement of percentage by volume of poisons listed in schedules A and B, section 1364. Referred to the Education Committee.

Assembly Int. 1151, Haskell, adds new section to the Penal Law, making it unlawful for a milk dealer, storekeeper, or other person to sell milk at price less or more than price fixed by commissioner of agriculture for the particular transaction; also prohibiting devices for evading such fixed price. Referred to the Codes Committee.

Assembly Int. 1152, Haskell, Agriculture and Markets Law, empowering Department to regulate pasteurization and bottling of milk and making it unlawful to pasteurize or bottle milk for consumption in State which the dealer has sold at a price less than the minimum price fixed for such sales. Referred to the Agriculture Committee.

ACTION ON BILLS

Senate Int. 20 (late Print 943), workmen's compensation, disabling disease, has reached third reading.

Senate Int. 619, motor fuel tax, has reached third reading.

Senate Int. 620, motor fuel, additional tax, has reached third reading.

Senate Int. 302, Health Law, grants and gifts to hospitals, and so on, has passed.

Senate Int. 643, State aid to municipalities, has been reported.

Senate Int. 123, workmen's compensation, carrier's physician, has been reported.

Senate Int. 706, extending TERA, has passed.

Assembly Int. 816, motor fuel, additional tax, has reached third reading.

Assembly Int. 818, motor fuel tax, has reached third reading.

Assembly Int. 498, Health Law, grants and gifts to hospitals, and so on, has reached third reading.

Assembly Int. 321, health districts, cities, nurses, has passed.

HEARINGS

Feb. 20—As. Int. 558 { Working hours of nurses in public hospitals; hearing before Assembly Committee on Labor and Industry.

Feb. 26—As. Int. 202 { Civil Service examinations; hearing before Assembly Committee on Judiciary.

Feb. 27—As. Int. 150 { Workmen's Compensation Law, medical care; hearing before Assembly Committee on Labor and Industry.
As. Int. 210

As. Int. 644 { Workmen's Compensation Law, occupational diseases; hearing before Assembly Committee on Labor and Industry.

As. Int. 740 { Workmen's Compensation Law, appearances, attorneys; hearing before Assembly Committee on Labor and Industry.

HARRY ARANOW, B. B. BERKOWITZ

B. WALLACE HAMILTON

JAMES F. ROONEY, LEO F. STIMPSON

Committee on Legislation

Current Comment

This is the second time in the history of the American Medical Association that a Special Meeting of its House of Delegates has been made necessary. The first time a national emergency impended—the United States was about to embark upon a great war. The organized profession then assembled its representatives and from the deliberations there ensued a fine medical organization which took its place in the armed forces of the country. The record made by organized medicine during the War is history. Our people were on the whole better served than those of our allies, and the country is proud of the results achieved. Now, too, a national emergency impends. The very life of the profession is at stake and the type of service which it is to render to people of our country is the issue. The high quality of service to all the people of the United States is threatened.

The so called "Epstein bill," proposed by the American Association for Social Security and now being promoted in individual states, is a vicious, deceptive, dangerous, and demoralizing measure. It introduces such hazardous principles as multiple taxation, inordinate costs, extravagant administration and an inevitable trend towards social and financial bankruptcy.

New York Medical Week, date of February 9 says, "The labor leaders who are favoring compulsory health insurance should study the Byrne bill to see who is to receive the money deducted from the pay envelope of the worker. On the Health Insurance Board, in addition to a \$10,000 director, there will be three appointees receiving \$7,500 each, plus traveling expenses. A State general advisory council of twelve and a State medical advisory council of nine will also be entitled to traveling and other incidental expenses. An unsuspected number of districts will each have a full time finance and full time medical supervisor. Each district in turn will be subdivided into local areas, each with an office headed by a full time finance manager and full time medical manager. Local councils of four to seven members will receive per diem fees and traveling and incidental outlays. Unlimited local advisory committees appointed by these local councils will also enjoy the privilege of traveling and incidental expenses. All this, of course, is to lower the costs of medical care!"

Dr. Manfred M. Zachard, a physician who has had a very large experience with sick benefit insurance in Germany, says, "There

were over two hundred sick benefits in Berlin. The fees paid by them to the physicians amounted to about 5 to 6 per cent of their respective expenses." He further states that "for obvious reasons the physician working under the fund often declined to declare the patient as recovered and able to work. Cases then went to a supervising physician and if then the patient and doctor could not agree, the insured could be examined by another supervising physician. Finally, it was still possible to have arbitration." He goes on to say, "The popularity of an insurance physician was not dependent upon his medical ability but the medical men who prescribed the most medicine or other remedies, especially when they did so without lengthy examinations, were most favored. The patient's gradually growing realization of the fact that he had a legal right to sick benefit assistance undoubtedly aroused disproportionate greed on his part. In many cases bureaucratic organization of the sick benefit insurance aroused bitterness in physicians and patients."

The *Bulletin* of the Medical Society of the County of Monroe says, "Any physician who has been privileged to arrive at degrees of stability and skepticism and foresight from his own experience in his life work knows that no system of medical practice can survive which fails to take into account moral wisdom, deep faith, and personal loyalties. He is warranted in the assurance that any failure to cherish and preserve the ideals of present medical practice cannot endure in our civilization."

Dr. George Hoyt Whipple, responding to the testimonial dinner commemorating his winning of the Nobel Prize, said, among other things, "It behooves teachers to encourage serious discussions of these questions coming to conclusions that may be tested. Members of the medical societies should co-operate in conclusions reached by organized medicine."

In his annual address on his inauguration as President of the New York Academy of Medicine, Dr. Eugene H. Pool said that "despite the depression and the fact that those in poverty must be fed, clothed, sheltered, and cared for when ill, the deplorable living wage now given the doctor would only bring about inferior grades of physicians unless this condition be remedied in some manner." He said that in 1934, 9,500,000 patient days care were provided by hospitals of the city (New York) and 6,800,000 patient out days were

afforded, for which members, with few exceptions, received no recompense. Continuing, he said, among other things, "Medical men of a community may agree among themselves as to a basis for charges. They should, as complete groups in various communities, try such methods as offer the greatest promise. Criti-

cal study of experience of this nature should be carried out before the final program is proposed. Any plan should be a corporated community organization so that all unfair competition may be avoided. The choice of physician or surgeon should rest with the patient."

Additional Notes on Income Tax Deductions

Taxes on real estate and personal property paid during the year 1934 are deductible. So-called taxes, which are assessed against local benefits, such as streets, sidewalks, drainage, and other like improvements, are not deductible, for they tend to increase the value of the property and thus constitute cost of a permanent improvement. The Federal income tax may not be deducted. Income tax, however, paid to the State by an individual on his income is an allowable deduction on his Federal income-tax return.

Customs duties paid by a person on articles imported for his own use are deductible. Admission taxes, imposed on admissions in excess of 40 cents, are deductible, but the taxpayer must show that account has been kept of the amount paid. Taxes on club dues are deductible by the member paying them. An individual may deduct the tax on his telephone conversations, radio messages, telegrams and cables, on the checks he has drawn, and on the rent of his safe deposit box.

License fees exacted by a State or city upon certain businesses are deductible as taxes. Automobile license fees are ordinarily taxes and deductible. Postage is not a tax and is not deductible. In general, taxes are deductible only by the person upon whom they are imposed.

Under the Revenue Act of 1934, no Federal estate taxes, State inheritance, estate, legacy, or succession taxes, or gift taxes are deductible on any income-tax return. The Federal taxes on automobiles, gasoline, and liquor are imposed upon the manufacturer, producer, or importer, and are not deductible by the purchaser or consumer. Whether or not the gasoline tax or the sales tax levied by a State may be deducted by the individual purchaser depends upon the terms of the State law imposing the tax, consequently the right to the deduction, as between purchaser and seller, varies in the different States.

If an automobile is used for both business and pleasure, all of the maintenance and operating expenses connected therewith, which constitute allowable deduction for Federal income-tax purposes, should be allocated to the two uses on the basis of the time that it is used for each. For example, if the total expense of operation and maintenance, plus depreciation, for the taxable year amounted to \$800, and the car was used three-fourths

of the time for business and the balance of the time for pleasure, the allowable deduction for Federal income-tax purposes would be \$600.

If a law which imposes a tax on gasoline shows that the tax is imposed on the consumer and not on the dealer, the consumer may deduct as a tax, for Federal income-tax purposes, the amount of the gasoline tax paid by him; but the taxpayer must have kept records of the payment of such taxes in order that the deduction may be substantiated as is required by the law and the regulations. The Federal gasoline tax imposed by section 617 of the Revenue Act of 1932 as amended is not deductible by the consumer. A taxpayer may ascertain whether the gasoline tax imposed by a State is deductible by the consumer or by the dealer by addressing an inquiry to the collector of internal revenue for his district.

In any case where the gasoline purchased is used for business purposes the tax may be added to the cost of the gasoline and deducted as a business expense; but where that is done, the gasoline tax cannot be deducted separately under the item of taxes.

The revenue act provides for "a reasonable allowance for the exhaustion, wear and tear of property used in the trade or business, including a reasonable allowance for obsolescence." For convenience, such allowance usually is referred to as depreciation.

In claiming a deduction for depreciation several fundamental principles must be observed. The deduction must be confined to property actually used in trade, business, profession, and to improvements on real property, other than property used by the taxpayer as his personal residence. In general, it applies to the taxpayer's capital assets—buildings, machinery, and so on—the cost of which cannot be deducted as a business expense.

A lawyer, doctor, or other professional man may not charge off as a current expense the cost of a library used wholly in his profession, this being a capital expenditure and the library a capital asset, but he may deduct an allowance for depreciation based upon the useful life of the library. If part of a professional man's residence is used by him for office purposes, a proportionate amount of the depreciation sustained may be deducted, based

generally on the ratio of the number of rooms used for such purposes to the total number of rooms in the building. The same principle applies if a taxpayer rents to others a portion of his residence. Under such conditions, however, the taxpayer must include in his gross income the rentals received.

The amount to be recovered by depreciation is the cost of the property, if acquired after February 28, 1913. If acquired by purchase prior to that date, the basis is the cost of the property, less depreciation sustained prior to March 1, 1913, or the value on March 1, 1913, whichever is greater.

The proper allowance for depreciation is that amount which should be set aside for the taxable year in accordance with a reasonably consistent plan (not necessarily a uniform rate), whereby the aggregate amount so set aside, plus the salvage value, will at the end of the useful life of the property equal the cost or other basis of the property.

The depreciation rate of a building is not based upon the number of years it will stand before being condemned and razed, but on the number of years it will remain habitable or serviceable for the purpose constructed.

If the taxpayer builds a new building, the period over which depreciation may be claimed begins at the time the building is completed and capable of being used. Buildings under construction are not subject to a depreciation allowance.

If it is clearly shown that, because of economic or other conditions, property must be abandoned at a date prior to the end of its normal useful life, so that depreciation deductions alone are insufficient to return the cost or other basis, a reasonable deduction for obsolescence may be allowed in addition to depreciation. No deduction for obsolescence is permitted because, in the opinion of the taxpayer, the property may become obsolete at some future date.

TWO AMERICAN SOCIAL HYGIENE ASSOCIATION PUBLICATIONS

The American Social Hygiene Association, with offices at 50 West 50th Street, New York City, has recently announced the publication of miniature editions (8½ by 11 inches) of two exhibits. The first of them, *The Treatment of Syphilis*, shown in the American Medical Association's Scientific Exhibit in Cleveland last June, includes 24 charts made from a study of 8,000 cases at Johns Hopkins University, University of Michigan, The Mayo Clinic, University of Pennsylvania, and Western Reserve University in cooperation with the United States Public Health Service. The price is 30 cents a set, \$3.00 a dozen sets, postpaid. Special statements by Doctors Stokes, O'Leary, Wile, Moore, and Cole, regarding the treatment of syphilis, have been prepared to accompany this exhibit. The price for this collection is 10 cents a set, 80 cents a dozen. The charts, by titles, are as follows:

- 1 Mucocutaneous relapse during lapse of treatment, according to stage in which treatment was begun.
- 2 A. Site of mucocutaneous relapse lesions. B Time relation of mucocutaneous relapse
- 3 Comparison of treatment in 204 mucocutaneous relapses
- 4 Relation of arsenamine to the prevention of mucocutaneous relapse.
- 5 The sites of secondary lesions in 2,269 patients
- 6 Incidence of early asymptomatic neurosyphilis
- 7 Incidence of asymptomatic neurosyphilis according to stage of disease in which treatment was begun
- 8 Relation of blood Wassermann fastness to spinal fluid abnormalities in early syphilis
- 9 Positive darkfield examinations by stages of early syphilis
- 10 Treatment methods
- 11 Comparative effectiveness of treatment methods
- 12 Comparison of effectiveness of treatment methods in securing Wassermann reversals in one year.
- 13 Effect of prolonged treatment on satisfactory results
- 14 Percentage of satisfactory and unsatisfactory results obtained with indicated amount of treatment

15 The value of x-ray of the cardiovascular stripe in clinically latent syphilis.

16 The prognostic value of negative spinal fluid in latent syphilis

17 Frequency of symptomless infection

18 Outcome of pregnancy in untreated latent syphilis

19 Effect of treatment of syphilitic pregnant women with negative Wassermanns

20 Effect of treatment of syphilitic pregnant women

21 Results of treatment in latent syphilis, continuous vs. intermittent or irregular treatment

22 Results of treatment in latent syphilis by gross amount of treatment given

23 Results of treatment in latent syphilis according to the total length of observation

24 Influence of Wassermann fastness on the tendency toward clinical relapse

The second exhibit, *Gonorrhea in the Male*, also shown as part of the Scientific Exhibit of the American Medical Association, a few years ago, includes 10 charts, prepared by Dr. Edward L. Keyes, regarding the diagnosis and treatment of acute and chronic gonorrhea. The price is 10 cents a set, 80 cents a dozen. These charts may also be had in the form of thirteen slides, including five drawings in color. The price is \$8.00 per set, or they are available for rental at \$1.00 per day.

The Association believes this material should be useful in a variety of ways. As instruction for medical students it would be advantageous to place a copy of these handy exhibits in the hands of each senior, or at least to display the exhibit for students to examine. The material can also be used in talks to medical societies. The small charts may be set up as an exhibit or lantern slides could be made of each chart. Another use, the Association believes, is for the instruction of such people as nurses and social workers.

County Societies

Albany County

"Three types of nurses" were classified by Dr. Edgar A. Vander Veer as "those who have a love for their profession, those who become nurses for the money they think there is in it, and a few who have hopes of getting a husband." He was one of the speakers at graduation exercises for the 59th class of the National Training School for Certified Nurses in the Albany Institute of History and Art.

"Yours is a noble calling," Dr. Vander Veer declared. "It calls for hard work, for sincerity, and a sympathetic understanding."

He had several "don'ts" to offer to the nurses. Among them were: "Don't try to be the doctor. When you go into a home you will find it disorganized by sickness; don't let your presence disorganize it any further. Don't expect too much waiting on by members of the family, but do what you can to aid them."

Erie County

Dr. Samuel W. Hartwell, newly appointed head of the department of psychiatry at the University of Buffalo, will be director in charge of a new child guidance clinic to open soon at 88 Goodell Street.

Fulton—Montgomery Counties

A new State health district comprising Fulton and Montgomery Counties has been established and began to function on January 1. Like the other fourteen health districts in the State, the new district has been organized under Section 4-A of the Public Health Law which provides for the division of the State into districts, each one administered by a district state health officer appointed by and directly responsible to the State Commissioner of Health.

The primary object of setting up the new district, says the State Health Department, is to determine the relative efficiency of a small well-staffed State health district as compared with a County health department. Such an experiment is necessary because it has been amply demonstrated that New York State communities are loath to abolish local boards of health as required in the formation of County departments of health despite the fact that few places except certain of the large cities have adequate health service under the present type of organization.

The area selected for the new district comprises less than 1,000 square miles and has roughly 106,000 inhabitants, 30 per cent

of whom live in strictly rural territory. As now planned, a full-time district State health officer will be stationed in this area, together with a sanitary engineer and a staff of public health nurses.

Jefferson County

Intimate glimpses into the human side of medical history, gleaned from more than 50 years of practice, were given by Dr. E. A. Simonds, of Carthage, in a Rotary Club talk on January 29. When Dr. Simonds started practicing in Carthage over 50 years ago, he said that the customary fee for office treatment was 50 cents. A confinement case called for a \$5 fee. As public health officer his salary was \$50 per year, with \$3 a day for the work if he devoted his full time to it.

He mentioned the laxity in medical regulation in the years after the Civil War, when a few weeks' course of training and \$25 would give almost anyone a license to practice medicine. In his own case, however, he said that for many years he made it a practice never to have a newspaper, magazine, or novel in the house, and to spend at least an hour of every day in the study of medical subjects in order to keep abreast of the times in theory as well as practice.

Nassau County

Sensational newspaper articles published in Freeport allege that 58 per cent of the nearly \$200,000 paid for medical services by FERA in Nassau County last year went to 38 doctors, while the remaining 343 medical men received only \$70,000. One doctor is said to have had nearly \$14,000 of the medical relief funds, and several around \$8,000 each. The *Nassau Review* says that the County Medical Society is investigating the truth of these reports.

New York County

A Negro newspaper remarks that "a ray of hope for Negro physicians was cast by the promotion of Dr. St. Elmo E. Taylor, of 54 Jefferson Avenue, to the post of assistant visiting dermatologist and syphilologist at Cumberland Hospital, where for the past two years he was clinical assistant. This is the first time in the history of Brooklyn that a Negro physician has been called upon to serve in such a capacity.

"The appointment was made by Commissioner S. S. Goldwater, who is now under fire for refusing to appoint Negro physicians

to the staff of the new Queensboro General Hospital. The fight in this instance is being waged by the Committee for Equal Opportunities, the members of which consists of both colored and white professional and business people."

Five hundred physicians and nurses of the New York Post-Graduate Medical School and Hospital of Columbia University paid tribute to the surgical skill and leadership of Dr. John Frederick Erdmann, former director of surgery at the Hospital, at a dinner at the Biltmore on January 26.

Dr. Erdmann resigned from the hospital last summer to devote himself to his private practice which has become one of the most extensive in New York since he entered abdominal surgery 48 years ago. Joining in the tribute were Dr. Charles Gordon Heyd, his successor; Dr. Allen O. Whipple, professor of surgery at the College of Physicians and Surgeons, Columbia University, and Dr. John J. Moorhead, a member of the Hospital staff.

Onondaga County

Syracuse lost a brilliant physician on January 30, when Dr. J. Raymond Burns, former chief of staff of three of Syracuse's largest hospitals, died at his home, after a lingering illness. He was 46. He received his degree before he was 21, and had to serve as an interne for years in various hospitals before he was old enough to begin practice. He established the first prenatal clinic in Syracuse and for a number of years was Associate Professor of Obstetrics at Syracuse University.

Queens County

Dr. Carl Boettiger, of Flushing, a former president of Queens County Medical Society, has been appointed temporary chairman of the newly organized medical board of the new Queens County General Hospital. Dr. Frank Dealy of Flushing has been appointed temporary secretary. The hospital will open about July 1.

While condemning social medicine, Dr. Morris S. Bender declared in his presidential address to the Queens County Medical Society that doctors must re-establish their profession so that "every human being can obtain the most modern treatment regardless of his earning capacity. The American people are patiently awaiting the profession's action. Medical practice will have to be regulated as any other business to accomplish this goal.

"Health service in many instances has become almost a luxury. We have permitted

institutions, the workshops of physicians, to operate like vast hotels. But modern scientific medicine is worthless unless it can reach every human being, regardless of economic status.

"The physician must recognize that the mental attitude of the people is changing and everyone is looking into the future with hope. The old order of things is gone, never to return, and with vision we shall move forward to a higher order of social prestige through which all mankind will be benefited."

Warren County

The Glens Falls Academy of Medicine at a meeting on January 24 renewed its fight for a Glens Falls Medical Center, and a committee was appointed by Dr. Conrad R. Hoffman, chairman of the meeting, to confer with groups from the Glens Falls Hospital Board and the local Chamber of Commerce on the erection of the institution.

Despite their setback in the first effort to have the erection of a medical center endorsed by the people of the city, they will continue to push the plan until such endorsement is obtained, members of the Academy announced.

Westchester County

Many will remember the report made some time ago by the Westchester Committee on Economics on the cash value of medical charity in hospitals. It was widely quoted in the press. Now the Committee has computed the average individual contribution of the attending physicians and surgeons in Westchester hospitals, and found that each of 408 staff attendants in the county contributed services to the value of \$4,553.61 of the total contribution of \$1,857,873 worth of free medical and surgical service. The public should not be permitted to lose sight of its debt to the profession, and this credit stands as one of the many reasons why the profession is entitled to determine its own social destiny.

The New Rochelle Police Department is complimented by the *Westchester Medical Bulletin* on the thorough, speedy and efficient manner in which it recently apprehended one Egbert A. Brooks, 38, negro, of New Rochelle. The defendant is now resting in the County Penitentiary and he is also under a \$500 fine levied by Acting City Judge Fallon. Brooks had entered a plea of not guilty when first arraigned, but later changed his plea to guilty on a charge of illegally practicing medicine. He admitted prescribing medicine in tablet form to three women "patients" and collecting fees. He was known to his patients as "Dr." Brooks.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Malpractice—Care of Maternity Case

A few weeks ago a case came before the highest court in one of the nearby states which serves as a very good illustration of the careful application by a court of the exacting rule which governs the liability of a physician in a malpractice action.*

The plaintiff in the case was a young married woman who had made arrangements with the defendant, a physician who had specialized in obstetrical cases for a number of years, to attend her during the delivery of her expected child and to render to her prenatal and postnatal care. When she first consulted him in January, she was about three months pregnant; the doctor saw her regularly at least once a month down to the end of July and the course of her period of pregnancy was uneventful. On August 4, she entered the hospital where the defendant, the following day, delivered her of the child. Her labor was more than ordinarily protracted. It appeared from the evidence in the case that this was her first child and that she was described as being a closely built woman. In the course of the delivery the doctor made an incision in the patient's perineum for the purpose of preventing its rupture. After the delivery the perineum was sutured by the doctor. She remained in the hospital about ten days after delivery and her convalescence in the hospital was uneventful except that a few days after delivery she complained of pain in the region of the sutures which were removed the day before she left the hospital. At that time the doctor examined the incision and found it was apparently perfectly healed. When the patient was discharged from the hospital she was instructed to return to the defendant in a month for examination and check up.

According to the patient a few days after she returned to her home she noticed a discharge of pus from the region where the sutures had been and experienced pain. She claimed to have reported these facts to the doctor by telephone. His recollection, however was that no such complaints were made at this time, but the patient did return to the doctor's office several times during the following two weeks and was told to wait until a later date for further examination.

On September 14 the doctor examined the patient at his office. At that time the incision

in the perineum was apparently healed. He observed what was described as being a dimple on the skin at the lower end of the incision. He was unable to insert a probe at this point and as she complained of pain and tenderness in the region of the sutures, he directed her to return for another examination in a few weeks.

The patient came back to the doctor on October 9, and at that time examination revealed a small sinus opening at the point where the "dimple" had been which was about the size of the lead in a pencil. With a fine probe the doctor was able to follow the opening for approximately three-quarters of an inch and it appeared to extend no further. He irrigated the condition and curetted it and touched up the edges with silver nitrate. Four weeks later she came back to his office again but at that time she was so hysterical that he was unable to examine or treat her so he told her to come back in a short period of time. The patient's version of that visit was that she was told by the doctor that he did not know what to do about her condition and that he believed the condition to be incurable. The doctor denied that any such conversation took place.

She did not return to the doctor thereafter but, instead, on November 9, consulted a certain Dr. R., who upon examination found the same sinus condition, treated it in much the same manner. Dr. R. at the end of the month performed an operation upon the patient and excised the sinus tract. It however did not heal. After about five months Dr. R. performed the second operation for the purpose of removing the condition which was then present, which he found to consist of a true fistula, leading into the rectum. After that operation the condition healed and the patient recovered rapidly.

The patient brought suit against the defendant in which she charged that his treatment of her had been improper. She made the specific claim that when the defendant was informed by her shortly after she left the hospital of the pain and discharge from which she was suffering, he was negligent in not calling upon her immediately and observing her condition more promptly than he did. She claimed that as a result of the delay the sinus developed into a fistula and it became necessary for her to undergo the two operations.

* Green vs. Stone, 176 Atl. 123

When the case came on for trial plaintiff introduced evidence to the effect that the proper care of the case required the defendant to see the patient more promptly after being told of her condition shortly after she left the hospital. The medical testimony in the case was uncontradicted, that proper practice in the treatment of the condition of the plaintiff at that time required irrigation and cauterization for the purpose of preventing the necessity of resorting to surgery. Testimony did not show whether such treatment, if it had been more promptly applied, would have had any appreciable effect on the result. Dr. R., the physician who performed the operations after the plaintiff left the care of the defendant, was called as a witness in the case by the plaintiff and gave testimony to the effect that sometimes the sinus, such as was present in the case, heals up with office treatment by irrigation and cauterization and that sometimes such treatment would effect a cure of the condition. He also gave testimony to the effect that while a sinus may be cured without surgery a fistula rarely could be cured without surgery.

A certain Dr. S., called as an expert witness by the plaintiff, admitted that it was impossible to say definitely whether irrigation by antiseptics could have cleared up the condition in question. He gave testimony to the effect that a sinus can be better treated in its early stages than at an advanced stage. He also said that it was impossible to say whether the use of washes, hypodermic syringes, and silver nitrate would have been sufficient to have cured the patient.

From the testimony upon the trial it was impossible to ascertain how long the fistula had existed, or what was the earliest date it might have been discovered. There was no basis for determining upon competent testimony how long the sinus had existed before October 9, the date when the defendant found it.

At the conclusion of the testimony the issues were submitted to the jury and the verdict was found in favor of the plaintiff. The Trial Court ruled that the verdict should be set aside on the ground that there was no evidence which showed that plaintiff's injuries were caused by an act or omission of the defendant. The plaintiff took an appeal from the ruling of the Trial Court.

The Appellate Court, in the course of its opinion, affirming the ruling of the Trial Court, set forth the rule governing the liability of a physician under the circumstances as follows:

One who holds himself out as a specialist in the treatment of a certain organ, injury or disease . . . is not to be judged by the result, nor is he to be held liable for an error of judgment. His negligence is to be determined by reference to the pertinent facts existing at the time of his

examination and treatment, of which he knew, or in the exercise of due care should have known. It may consist in a failure to apply the proper remedy upon a correct determination of existing physical conditions, or it may precede that and result from a failure to properly inform himself of these conditions. If the latter, then it must appear that he had a reasonable opportunity for examination, and that the true physical conditions were so apparent that they could have been ascertained by the exercise of the required degree of care and skill, for if a determination of these physical facts resolves itself into a question of judgment merely, he cannot be held liable for his error.

The Appellate Court pointed out that the plaintiff had failed to establish a valid case entitling the plaintiff to damages against a physician stating in part as follows:

The proper treatment of a condition such as claimed by the plaintiff and the probability of effecting a cure by various methods present questions requiring the special experience of expert witnesses. It is a field requiring special skill and learning, wherein it is not permissible for laymen as non-experts to set up any artificial standards as to methods of treatment or probability of cure. The duty rested upon the plaintiff to produce testimony before the jury to the effect that the earlier treatment of the case with reasonable probability could have aided the patient. As the testimony goes no farther than to state that earlier treatment might have been beneficial, the jury was left purely to speculation as to whether the conduct of the defendant was a cause of the plaintiff's subsequent condition; and under the circumstances, the court did not err in setting aside the verdict.

Treatment of Sty

A man consulted a physician, who had for many years specialized in treatment of the eye, ear, nose, and throat diseases, complaining of a painful condition of his right eye.

The doctor examined him and found a sty present and infiltration of the upper lid. The doctor thereupon lanced the sty with a sterile knife and gave the patient a preparation of silver with instructions to apply the solution to his eye every two hours and return the next day for a further examination.

According to the doctor his knife did not come into contact with the patient's eyeball during the operation. The patient did not return as instructed and the doctor never heard anything further from him until he received a letter from attorneys threatening suit on behalf of the patient. The claim was that the doctor in treating the eye had scratched the eyeball.

A suit was instituted against the doctor to recover damages for alleged malpractice and the plaintiff made the specific claim in his pleadings that the defendant so carelessly conducted himself in removing the sty that he scratched the cornea of the eye and left

the eye in that condition without the application of any antiseptic and without further treatment. The plaintiff claimed that an infection developed resulting in a small ulcer and infection on the lower lid and that he underwent treatment for over a month. He, however, claimed no permanent loss of vision.

When the case was reached for trial on the calendar of the court, the plaintiff's attorney showed no inclination to try the case and after some time had elapsed and the defendant's attorney had made it clear that there would be no offer of settlement, the plaintiff consented to discontinue the action.

Removal of Semilunar Cartilage

A man who was employed as a bricklayer while engaged in the construction of a building fell from a ladder and received contusions and abrasions of the knee.

Emergency treatment was provided him by his employer and he was referred to a surgeon for examination. The surgeon diagnosed the condition from which the man was suffering as a dislocation of the semilunar cartilage of the knee and suggested an operation.

An operation was performed for the purpose of the removal of the semilunar cartilage and a cast was applied on the leg from the foot to the thigh. The patient remained in the hospital from four to five weeks under the care of a doctor. A week after he left the hospital the cast was removed by another physician.

The surgeon kept in touch with the plaintiff for a period of several months and examined him from time to time and directed him to return to the hospital on about six occasions for the purpose of placing him under ether and manipulating the knee. At the time the doctor last saw the patient he was walking without cane or crutches and his leg could be flexed at an angle of nearly 45°.

An action was brought against the doctor, in which the claim was made that the defendant's treatment of the case was improper and that as a result the plaintiff was caused to suffer loss of function of the knee and inability to pursue his usual vocation.

When the case was reached for trial the plaintiff was not ready to proceed and the case was marked off the calendar. After some time had elapsed an application was made to the court to dismiss the action for failure on the part of the plaintiff to prosecute the same. The said application was granted, thereby finally terminating the action.

Treatment of Carcinoma

A specialist in surgery was consulted by an interne whom he had been acquainted with for some time with respect to complaints of abdominal distress. The doctor examined certain x-ray pictures that had been previously taken of his intestinal tract and found that they indicated a lesion of the colon. The doctor upon manual examination found a mass in the right upper quadrant and suggested an exploratory operation.

The operation was arranged, preparatory to which it was necessary to administer a blood transfusion. A right upper trans-rectus incision was made and the doctor found a large nodular mass involving the transverse colon and extending up to the liver. He examined it grossly and without making a biopsy determined that the condition was an inoperable carcinoma. The abdomen was then closed and the patient improved satisfactorily and in two weeks was able to leave the hospital. The surgeon advised no further operation for he felt that to disturb the mass he found on making the exploratory operation would accomplish nothing except to hasten the patient's death.

Some time after an action was instituted against the surgeon based upon the claim that the defendant was negligent in treating the case as one of an inoperable carcinoma, and that his diagnosis was incorrect and that it prevented the plaintiff from obtaining adequate remedial treatment for his condition. Subsequent events, however, indicated that the defendant's diagnosis was undoubtedly correct for after the case had been pending only a few months and before it could be reached for trial the plaintiff died, thereby abating the action.

FOR THE OVERWORKED DOCTOR

A tired person is an inefficient person, no matter what sort of work he is doing or what it is that has tired him. Emotional and mental strain will, in many, produce fatigue faster than will physical effort. Physicians, being human, must be included in this generalization, says *Clinical Medicine*.

In these days, when many duties press upon us, it is not always possible for the truly busy people to obtain as much sleep

as they really need, so it becomes increasingly important that we should learn the art of relaxation, in order that we may take our rest in small installments, for it is strain, rather than actual labor, that exhausts most of us unduly.

We all need to learn how to relax the body and the mind for brief intervals, and this is an art which can be taught by books and learned by sincere and regular practice.

Books

REVIEWED

Postures and Practices During Labor Among Primitive Peoples—By Julius Jarcho M.D. Octavo of 175 pages, illustrated. New York, Paul B Hoeber, Inc., 1934. Cloth, \$3.50

An attractive volume illustrated on almost every page. Engelmann has been freely drawn upon of course, and many drawings of Witkowski and Felkin, not nearly so well known, but just as interesting as Engelmann's, are included. The author's interest in the pelvic girdle is in evidence throughout, his purpose is the stimulation of modern obstetricians, so that they may see the advantages of physiological posture in assisting the forces of labor. Jarcho has assembled some very interesting material.

CHARLES A. GORDON

Corrective Physical Education—By Josephine L. Rathbone M.A. 12mo of 292 pages, illustrated. Philadelphia, W. B. Saunders Company, 1934. Cloth, \$2.50

The chapters on "Anatomy and Physiology" are exceptionally good for this type of work.

The book builds up its theme from the normal to the abnormal in a logical manner. Included are the early indications of diseases causing deformities. The psychological effect of deformities is well presented. The summary of cardinal principles of body building is excellent.

The author throughout shows definitely a concept of the entire problem of a well body as a whole and has not lost sight of the whole problem because of concentration on the corrective side of treatment and prevention.

KENNETH T. YOUNG

International Clinics—A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, etc. Vol. 3. 44th Series 1934. Louis Hamman M.D., Editor. Octavo of 327 pages illustrated. Philadelphia, J. B. Lippincott Company [c 1934]. Cloth, \$3.00

In the section on Medicine some of the subjects discussed are "The Heart and Athletics," "Addison's Disease," "Allergy," and "Functional Symptoms in Relation to Organic Disease." Maud E. Abbott contributes an extensive discussion on the "Differential Diagnosis of Congenital Heart Disease."

In the surgical section, "Cancer of the Stomach," "Functional Uterine Hemorrhage," "Hypertthyroidism," and "Water Balance in Surgical Conditions" are among the subjects treated. In the treatment of acute intussusception, the conservative treatment by warm water injections is described and regarded with favor. There is a report from the Johns Hopkins Hospital of a clinical pathological conference on Hematemesis and other articles of much practical interest.

W. E. McCOLLUM

Essentials of Infant Feeding and Paediatric Practice—By Henry P. Wright, M.D. Octavo of 212 pages. New York, Oxford University Press, 1934.

The author has compiled a small volume of data concerning the proper diet for infants and children. Detail is omitted. Short paragraphs on each subject is the rule so that one may almost at a glance get the meat of the subject at hand. In looking through the book one gets the idea that brevity is overemphasized in some of the chapters.

THURMAN B. GIVAN

A Text Book of Pathology—Edited by E. T. Bell M.D. Second Edition. Octavo of 767 pages illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$8.50

The second edition of this text book has been revised the chapters enlarged and recent advances in pathology have been incorporated into the text. There is a new chapter on diseases of the bones and joints. The chapter on diseases of the kidneys is particularly good. Gynecologic and obstetric pathology is presented more fully than in many other works of one volume. The chapters on diseases of the spleen, nervous system, and the blood also deserve special commendation.

There are more references to the literature and after many of them are explanatory notes on the subjects

of the articles. This should be very helpful in selecting advanced reading. The illustrations are chiefly photographs of original specimens and are good.

The contributors are L. T. Bell, H. J. Clawson, Hal Downey, J. S. McCartney and C. J. Watson, all of the University of Minnesota.

F. B. SMITH

Bronchoscopy Esophagoscopy and Gastroscopy—A Manual of Endoscopy and Laryngeal Surgery. By Chevalier Jackson M.D. and Chevalier L. Jackson, M.D. Third Edition. Octavo of 485 pages illustrated. Philadelphia, W. B. Saunders Company, 1934.

Dr. Jackson's new book fulfills the present day need on this subject, not only on account of the great advances that have been made in foreign body work, but also because of the ever broadening field in diagnosis and treatment of disease of the trachea and bronchi. It has been condensed by omitting the developmental stages by which the fundamentals of this specialty were determined.

The new sections that have been added on gastroscopy and diagnosis and treatment of disease of the trachea and bronchi, make the book an invaluable aid, not only to the specialist but to the general practitioner as well. It is profusely and beautifully illustrated. Many of the plates are new and in color by the author.

JOHN AUWERDA

Mothers' Guide When Sickness Comes—By Roger H. Bennett M.D. and Edward T. Wilkes, M.D. Octavo of 400 pages. Garden City, N. Y., Doubleday, Doran & Company, 1934. Cloth, \$2.50

While many books have been written to aid in educating mothers how to recognize the need for consulting doctor in the care of their babies or children, most have fallen short in their objective. In a large city many physicians object to having their individual families buy these books on the ground that there may arise conflicts to their own teaching, and thereby the mother becomes more befuddled than ever. There is a great deal of truth in this statement yet so few physicians take time to point out for instance, how and when to bathe a baby, how to prepare a baby for winter, how to prevent the spread of a contagion and thousands of other questions that run through the mother's mind daily, that a book such as the authors have compiled should be used by thousands to good advantage, especially by those in remote places. They point out it is not the purpose to supplant the physician. The book is well done and very complete.

THURMAN B. GIVAN

Experimental Physiology—By Sir Edward Sharpey Schafer, F.R.S. Fifth Edition. Octavo of 168 pages illustrated. New York, Longmans Green & Company, 1934. Cloth, \$2.20

This fifth edition of Schafer's *Experimental Physiology*, revised with the help of W. A. Darr follows the general mold laid out by the previous editions, with its emphasis on the collection of fundamental physiological data. It contains all of the time honored experiments and also some of the more recent ones on such subjects as the carotid sinus reflex and other heart reflexes. No attempt however, has been made to follow the newer trend in the direction of experiments in human physiology, almost half the manual being devoted to muscle nerve physiology.

The experiments are concisely and adequately presented and are supplemented by numerous simple diagrams of the apparatus used.

DAVID I. ABRAHAMSON

The Dangerous Age in Men—A Treatise on the Prostate Glands. By Chester T. Stone, M.D. 12mo of 105 pages. New York, The Macmillan Company, 1934. Cloth, \$1.75

This little book is a discussion of sex life, particularly in the male and the functions and physiology of the prostate in the ageing male. It is written for the lay and presents a delicate subject with reasonable restraint.

N. P. RATHBURN

Human Sterility.—Causation, Diagnosis, and Treatment. A Practical Manual of Clinical Procedure. By Samuel R. Meaker, M.D. Octavo of 276 pages, illustrated. Baltimore, The Williams and Wilkins Company, 1934. Cloth, \$4.00.

Doctor Meaker's book of 264 pages is a well-written presentation of the routine investigation given sterility problems by a group working under his direction. It describes in detail the medical, urological, and endocrinological aspects of the subjects as well as the gynecological procedures and treatment. Certain details of study have been carried to a degree which is frankly experimental and without proved diagnostic importance. The routine passing of the urethral sound in the male, blood chemistry, counting of blood platelets, systematic determination of vital capacity, instillation as well as insufflation of the tubes, sugar tolerance test, and the like, will be considered impracticable by many readers.

The rôle of the endocrines in fertility has been extensively discussed, but the correlation of blood and urine hormone determinations with ovarian function is singularly omitted. Many deductions drawn as to the importance of clinical signs and symptoms in the realm of glandular disease and the relation of the latter to failure of conception will not be accorded universal acceptance.

The student of fertility will find much of value in this book; the data has been carefully assembled and in a way to heighten the readability of the text. A somewhat dogmatic style doubtless adds to the teaching force of the contribution, and, concerning the controversial points the reader is left to his own conclusions.

WM. H. CARY

Influenza.—By David Thomson & Robert Thomson. Quarto of 916 pages. Baltimore, Williams & Wilkins, 1934. (Volume X, May, 1934 of the Annals of the Pickett-Thomson Research Laboratory. Monograph XVI, Part. II.) Paper, \$17.50.

This part completes the large monograph of 1557 pages and furnishes a complete study of influenza in all its phases. The bibliography alone contains over 4,500 references and occupies 101 pages. In this part, all the complications are discussed, such as the respiratory, ocular, nervous, aural, cardiac, and gastro-intestinal.

Opinions as to gastro-intestinal influenza occupy 75 pages. The exact nature of this form is concluded to be obscure and the relation to the predominant respiratory type undetermined.

The effects of the disease upon the heart and circulatory system are of much interest. The authors state that "there is considerable evidence to indicate that the virus of influenza inflicts, in many cases, a direct damaging effect on the cardiac and circulatory structures." The influenza toxin may perhaps act directly on the cardiac muscle, but generally the toxic influence is believed to be limited to the cardiac nervous apparatus. Cases of primary endocarditis, myocarditis, and pericarditis have been recorded, although somewhat rare; more usually these develop as a result of mixed pyogenic infections associated with secondary lung complications.

According to Sansom and to Mackenzie, influenza never produces any disease of the heart even remotely resembling the rheumatic heart.

This is an extremely valuable reference book, the most complete of its kind ever published and fills one with admiration for the industry exhibited and the result achieved.

W. E. McCOLLUM

A Text-Book of Pathology.—An Introduction to Medicine. By William Boyd, M.D. Second Edition. Octavo of 1047 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$10.00.

It is quite in keeping with the merit of this book that a second edition should have been issued within so short a time. It would be impossible to review in detail the contents of the volume. As a text-book of pathology it stands in a class by itself. It may be

criticized, perhaps, for the brevity with which some subjects are considered. But this is compensated for by the references at the end of each chapter. The illustrations are exceptionally apropos to the text and are exceedingly well done. The views expressed are safe and sound.

This book should prove exceedingly valuable to the student and general practitioner, and may even be used with great profit by the specialist in tissue pathology. The scope of the work is particularly complete and covers every subject with which the pathologist comes in contact.

Dr. Boyd has again scored a complete victory with the presentation of *A Text-Book of Pathology* to the medical public.

MAX LEDERER

Industrial Maladies.—By Sir Thomas Legge, M.D. Edited by S. A. Henry, M.D. Octavo of 234 pages. New York and London, Oxford University Press, 1934.

There are very few medical practitioners today who do not come in contact directly or indirectly with problems incidental to industrial diseases. An authority in this field, therefore, as is Dr. Legge who writes this volume, is worthy of special attention.

From a long experience in England in this field, the author discusses various diseases, notably those which are the result of poisons such as arsenic, lead, mercury, and benzene and its homologues.

An interesting chapter to physicians is that of industrial dermatitis, for these are conditions commonly encountered in general practice. Another chapter discusses industrial pulmonary disease caused by dust.

As most physicians are watching closely the development of workmen's compensation laws in the United States, it is possible to compare the trend in England in this respect as noted in a chapter on this topic.

ALFRED E. SHIPLEY

Conception Period of Women.—By Dr. Kyusaku Ogino. English Translation by Dr. Yonez Miyagawa. 12mo. of 94 pages. Harrisburg, Pa., Medical Arts Publishing Company. [c.1934]. Fabrikoid, \$1.00.

The researches of Ogino and Knaus are of course well known to gynecologists, and the public has already been informed that there is in every menstrual cycle a sterile period in which conception is impossible. A previous book on this subject enjoys a very wide circulation for its practical application is obvious. Now Ogino himself has prepared a brochure for popular study.

That there is a sterile period has long been known, but how to determine its exact time in the cycle has been the difficulty. Ogino and Knaus have arrived at approximately the same conclusions by very different methods.

Although not positive, it appears that the maximum span of life of the spermatozoon is less than three days, and there is excellent evidence to show that it loses its power of fertilization long before this. That the ovum survives for less than one day is almost certain. If we assume that ovulation bears a definite time relation to the next period, the problem becomes clear, and the solution is not difficult for all those whose cycles are fairly regular. Menstruation is but the result of ovulation, although Hartman will not admit this. Ogino is certain that the conception period is in the eight days from the twelfth to the nineteenth day before the next menses.

An excellent and very practical book. Because it is not written in the form of questions and answers it may not have the popular appeal of another well-known book on the same subject. This is authoritative, however, as Ogino himself is the author. It is too bad that the publishers have bound within its covers their own blurb on the front page, and a bid for volunteer book agents on the last. It reads: "Men and women who want to be agents and sell this book, should write to the publisher. Married women may work in their spare time, and earn a nice weekly income. Write for details."

CHARLES A. GORDON

Medical Broadcast

The following radio talk has been scheduled under the auspices of the Medical Information Bureau of the New York Academy of Medicine from Station WABC, C. B. S.: Thursday, March 7, 11:15 A.M., 15 minutes.

Subject: "Heart Disease in Children and Young Adults."

Speaker: Dr. Robert L. Levy, Director of the Heart Department, Columbia-Presbyterian Medical Center, New York City.

PSYCHIATRY AND THE GENERAL PRACTITIONER**Syndromes Commonly Met with in Practice**

MORTIMER W. RAYNOR, M.D.

WHITE PLAINS

Psychiatry as a special branch of medicine did not exist a hundred and fifty years ago. The practitioner of the day treated the psychiatric problems which came to him with the same relative understanding as he treated other medical problems. In our own State it is interesting to note that in 1792 psychiatric patients were sent to the New York Hospital by the attending physicians who continued their treatment in the general wards.

Because of certain practical difficulties especially with excited patients, psychiatric patients were provided for in separate institutions instead of in general hospitals. This separation of the patients into a special group removed them from the practicing physician and his interest waned. With the coming of Virchow and his cellular pathology the contact appeared to be completely broken. In the early part of the last century with the advent of separate provision for psychiatric cases, the study and treatment of these disorders was confined almost wholly to physicians in asylums and mental hospitals. By 1880 there again began to be a revival of interest in psychiatric problems by the profession generally. Since then psychiatric medicine has gradually taken its place beside general medicine.

Dr Van Etten¹ in an address, said of the physician in general practice

Let him study mental diseases whose victims fill forty two per cent of all hospital beds.

Let him study the fields of personality, of endocrinology, of social maladjustment, of eugenics of psychiatry and of the prevention of mental diseases where he will find much employment profitable to himself and our heavily burdened tax payers.

Any attempt to estimate the extent of the problem will at best give only an approximate answer. Reference to certain available data will however give a clue to the size of the problem and to estimates of its importance.

In 1932² there were nearly 50,000 patients cared for in New York State hospitals at an expense of approximately nineteen and a quarter million dollars. In the same year there were in round numbers 11,000 new patients admitted to the State hospitals.

Ziegler³ in 1931 made an inquiry of more than a hundred physicians mostly in general practice in the vicinity of Albany, and reported that about 20 per cent of the patients who consulted them had no bodily disease and, that each doctor sent on an average of 7 patients to a State hospital each year. The National Committee for Mental Hygiene⁴ made inquiries of 683 physicians who estimated that 35 to 40 per cent of their cases had very definite psychiatric factors which it was necessary to take into consideration in their treatment. Moersch⁵ reported that about 40 per cent of the patients admitted to the Mayo Clinic in 1927 had psychiatric disorders or psychiatric complications of the illnesses for which they were treated at the Clinic. It is apparent from the above that psychiatric problems assume considerable importance to the profession when it is realized that these patients consult a general physician first about their illness.

The attitude of physicians to psychiatric problems is of much importance. Ziegler³ in his study found that the doctors expressed their interest as follows:

	No interest	Slight or moderate interest	Great interest
In nervous patients (95).....	12	55	28
In mental patients (93).....	25	56	12

A survey⁶ made in the metropolitan district of New York City (including Westchester County and neighboring communities of New Jersey and Connecticut) showed that the physicians of Westchester County were better informed and more interested in psychiatric disorders than the other physicians of the metropolitan district. This is undoubtedly due to the regular psychiatric meetings for physicians of the community held at Bloomingdale Hospital over a period of a number of years.

An analysis of the first admissions to State hospitals (1932) shows that 45 per cent, or about 4,800, are suffering from organic psychoses—psychoses in which there is demonstrable anatomic involvement of brain tissue. This group for purposes of discussion may be divided into three sub-groups: Group I which comprises the traumatic, cerebral arteriosclerotic, acute and chronic infections of the brain, toxic states, and those associated with other somatic disorders, were definitely under treatment by the general practitioner before they developed their psychiatric complications. Group II comprises the alcoholic group which in addition to being medical and psychiatric problems has important social implications. The senile psychoses and the psychoses associated with certain other diseases of the central nervous system comprise Group III and will only be mentioned here.

Group I, comprising 31 per cent of the total admissions, is directly the problem of general medicine, and prevention and early treatment of these cases must be accepted as such. They only become psychiatric cases when they have passed out of hand of general medicine. It should not be assumed that psychiatric medicine has nothing to contribute to these problems because they already have much to offer in the prevention, diagnosis, and early treatment.

The alcoholic disorders may be looked upon as joint problems of general and psychiatric medicine; the former because they come to them first, and the latter because they are better understood and treated since psychiatric medicine understands and deals more particularly with psychological and social maladjustments.

Psychiatry has much to contribute to general medicine in the understanding of this entire problem.

The general physician has always recognized with great astuteness the somatic signs of organic brain and nervous disease but has not been as familiar with, nor has he used to advantage, the psychic signs of brain involvement.

Rather than discuss the diagnostic groups separately it seems opportune to discuss psychiatric organic mental reaction types to the end that the organic features may be separated out and identified from those symptoms which are, more strictly speaking, functional or personality reactions.

The psychiatric organic reactions may be grouped as acute, subacute, and chronic types. To the acute reactions belong the stupors—delirious and acutely confused states which are named in order of the depth of their reaction. The measure of these is the level of the threshold of awareness to their surroundings. The sick patient who has no brain involvement is perfectly clear as to his surroundings throughout his illness. The patient with brain involvement varies much from minute to minute and hour to hour in his awareness to his surroundings and his ability to take in impressions.

The elements, then, of the acute organic mental reaction are: (a) *constant variation of the level of the threshold of awareness*; as the threshold raises the patient is less able to clearly take in impressions and may become disoriented, and as it goes lower apperception becomes more clear; (b) *variation of attention*; (c) *impaired retention* of incoming impressions leading to *defects of memory*; (d) *impaired activation* of trains of thought in relation to stored memories of past mental processes which leads to scattering and fragmentation of the train of thought; (e) *impaired elaboration* of thought processes in ideation and new trains of thought; this in turn gives rise to confabulations and also to phantasies and ill-defined delusional formations; (f) *diminution of mental tension* and mental capacity; (g). *speech defect* giving rise to slurring and paraphasia; (h) *illusions and hallucinations* of which the visual are the most characteristic but which may also be of hearing, smell, taste, and common sensations; (i) *an affect or feeling of fear*, sometimes of pleasure; and (j) *restlessness and mumbling*.

It is hoped that the foregoing delineation is recognized as an analysis of the picture of toxic or infective delirium.

The clinical picture varies in accordance with involvement or impairment of the above components of the reaction. Whether a case is one of partial stupor, delirium, or confusion depends upon the degree of impairment of, first the level of the threshold of awareness, and next of the variation of the other components. The importance of studying the clinical picture in detail is that any one of these symptoms may appear first and there may be any combination of them. Any one of these may be the first sign of ushering in an extension of the disease, a complication, or actual serious brain involvement.

It is important that they be watched for with a great deal of care. The slightest variation of awareness, drowsiness, or inability to grasp what is said, or misinterpretation of familiar objects or sounds, or slips of speech, or changes in affect, may be important signals of approaching danger, such signals will often give warnings of one to twenty four and forty-eight hours in advance. The recognition and accurate interpretation of these symptoms assist in making an accurate and early diagnosis. They assist in the differentiation of various organic diseases, and of organic and the more severe functional psychoses, also they give indication for treatment and help provide a basis for prognosis.

The need of reviewing this situation in both general and psychiatric practice is evident when we consider that frequently it is not until the full picture of delirium or confusion has developed some time later that the real situation is grasped. At this point it seems desirable to point out that functional and somatic disorders may be present simultaneously, and that each of them may color and at times obscure the picture of the other, also that it is more the custom in practice today than formerly to prescribe hypnotics more frequently. Patients learn the name of the drug prescribed and continue to take it for a longer period or in larger quantities than the physician is aware. The continued or excessive use of drugs often gives rise to what apparently are alarming symptoms in the course of their treatment and these are not infrequently misunderstood as the symptoms of one of the major psychoses.

The case which immediately follows is an illustration of the foregoing.

CASE I—A man aged 59 with moderate arteriosclerosis and heart and renal involvement, who was worried on account of loss of money, and drank moderately but daily, developed an acutely strangulated hernia. He was given morphin before leaving home for the hospital where he was operated upon at once. *He had no clear recollection of events after that time* although he appeared 'normal' to those about him. Six days after the operation he became delirious and some infection was found in his wound. During the next month and a half he continued delirious or confused and was noisy and restless for which he received drugs hither to as follows: Sodium bromide, 40 gr., codain 2 gr., chloral hydrate, 20 gr.—three times daily. In addition he received paraldehyde in ounce doses. His speech was thick and there was marked incoordination in the movement of his hands. His case was diagnosed after one and a half months as "alcoholic dementia and probably senile dementia."

This case presented the picture of an acute organic mental reaction from the beginning. Unclearness developed following the initial dose of morphin and from that time on he did not take in fully what was going on about him (threshold of awareness raised). Following the operation he was said to be "normal" for a week but did "say some queer things" (Inability to activate memories and to elaborate trains of thought into normal or rational thinking). After recovery he could not recall except hazily here and there anything that had happened during the week he was said to have been "normal" (impaired retention and memory). During his delirious period he was inattentive (high threshold of awareness), his talk was rambling and he expressed vague disconnected dreamy delusions and he attempted to pick up the physician's thumb which was resting on the table and referred to it as a cigarette (impaired activation and elaboration).

A study of the details of the clinical picture indicated an acute reaction toxic delirium with a good prognosis. Following his admission to Bloomingdale Hospital all medication was withdrawn the gastrointestinal tract was thoroughly cleared continuous warm baths were administered and fluid nourishment was forced. His mental condition cleared gradually. He passed through a period in which he partially grasped his surroundings but fabricated statements and only upon close scrutiny were they found to be phantasied stories based on events which fitted in with his previous experience but which were contrary to the actual facts. His manner was so natural that at times his family thought him normal. Two months after the medication had been stopped he became perfectly clear. He had an amnesia for the greater part of his illness up to that time. He understood that he had had a delirious period. There were no residuals of any mental deterioration and he was later discharged as recovered.

CASE II—A young man with a long standing heart lesion worried over his work and following an unusual exertion developed symptoms of cardiac decompensation with pain which lasted for weeks for which he was given moderate

doses of digitalis. About the middle of his illness he began having "nightmares" several times daily (onset of acute mental reaction) in which he saw vapors, red and black spots, and bugs in the room. At the same time he heard voices speaking and all sounds were exaggerated. Following an attack of diarrhea with a temperature of 102 he said his brother who was caring for him had killed two people in the bathroom, that meat served with his meal looked like a baby's face. He finally developed a great fear of being killed and became so disturbed that he was removed to Bloomingdale Hospital with the diagnosis of an "undetermined psychosis." Here he was restless, getting in and out of bed, looking behind the door and into bureau drawers, and showed varying degrees of confusion from partially grasping his surroundings to disorientation. He presented illusions and hallucinations of sight and hearing. He fabricated stories which appeared so rational that his family were at these times inclined to regard him as mentally well; then he would wander off into his phantasies and dispel their opinion. This condition continued even after his physical condition permitted him to be about and out of doors. The auditory hallucinations, hearing voices of people talking about him, were the last to clear up. Cardiac compensation was established, the digitalis was stopped, elimination was promoted, and a light-fluid diet was prescribed. One and a half months after admission he was discharged recovered from a toxic delirium. The auditory hallucinations which persisted after all the other symptoms cleared up were evidently reactions of his personality and not dependent entirely upon the toxic factors.

In this case despite the variation in the level of awareness the defective elaboration, the type and persistence of the hallucinations, the frequent naturalness of his behavior and talk were such that a diagnosis of functional psychosis was suspected. Yet a careful observation of the clinical symptoms indicated clearly that we were dealing with an acute organic mental reaction with a good prognosis. The variability of the threshold of awareness and the defect of elaboration were evident throughout the illness.

CASE III.—A man in the early sixties, with a college education, had been nervous for about a year. He suffered an automobile accident and was picked up and removed to a hospital in a semi-conscious condition with lacerations of scalp and many bodily bruises. At first he was semi-conscious, disoriented and restless. The diagnosis of laceration of the brain was made. The case record disclosed that he was "confused, restless, and at times irrational. He could not follow prolonged discussion and spontaneous statements were confused. He complied with minor requests and knew the month and the city in which he was under treatment. He tired almost immediately."

One month later his physical condition became so satisfactory that he returned home. Upon reaching home he promptly became confused,

restless, and noisy, for which drugs were given. The diagnosis was now made of intercerebral hemorrhages with edema. The subsequent course led to the opinion that a senile dementia had been initiated.

A week after his return home he was admitted to Bloomingdale Hospital where he presented the clinical picture of an acute organic mental reaction of the acute confusional type. All medication was stopped, the gastrointestinal tract was cleared, fluid nourishment was forced, warm, wet packs were administered, and a lumbar puncture showed some intracranial pressure which was relieved. The patient made an uneventful recovery in about three months. He had some spasticity of the extremities of the opposite side.

The acute confusion which developed in this case following his journey home was undoubtedly a fatigue reaction. It was interesting to note the return of the organic mental symptoms during the early part of his convalescence whenever he became fatigued. Two years after discharge from the hospital he was examined and found to be quite well mentally.

The prognosis of an acute delirious reaction is generally good when all the signs are present and the somatic or toxic disorder is not progressing or is indefinite and if the mental reaction is out of proportion to the physical signs. In the presence of increasing definite somatic disease the prognosis is not so favorable. In head injuries the prognosis is better with a delirious reaction without septic fever than with a continued stupor. Administration of drugs for restlessness is often an added cause of the delirious reaction and may become the sole cause of its continuation. Delirium with septic fever may indicate the onset of a meningitis or abscess. The prognosis of acute delirious reactions due to drugs is almost uniformly good.

The acute types of reactions seen in cerebral arteriosclerosis are generally of good prognosis. Acute reactions occurring early in heart and kidney disease are not of bad prognostic import provided prompt treatment is instituted. Variations in the clinical picture with the greatest impairment in the fields of retention and of elaboration are less favorable for a complete return to the normal mental state and the prognosis should be guarded especially when the progress is unusually slow. The organic mental reactions of the acute confused type are generally of reasonably good prognosis with the same limitation as the delirious reaction. It resembles the delirious reaction except the threshold of awareness is lower and hallucinations are less in evidence. Short delirious episodes or occasional hallucinations with fear sometimes occur. The term, confusion, as used

here is in reference to the level of the threshold of awareness and orientation, rather than to confusion of thought, which is so often not differentiated.

The subacute organic mental reaction types may begin as such or they may develop out of an acute reaction. The range of variation in symptoms which may be included in the subacute reactions is quite extensive. The most typical symptom of this type of reaction is acute confabulation. It is also spoken of as Korsakow syndrome. It will be recalled that Korsakow first described this syndrome but thought it was always associated with polyneuritis and alcohol. It is definitely found as an organic mental syndrome and by no means always associated with alcohol. It is found in infective-exhaustive-toxic states as well as other organic states.

In this reaction the threshold of awareness is not disturbed but there is a marked retention defect which interferes with the elaboration of impressions and an amnesia or memory defect which may be patchy or complete for a more or less definite period. The confabulations may be wholly phantastic or may be along familiar or habitual lines and are sometimes referred to as "opportune confabulations." Because the threshold of awareness is not disturbed the patient appears clear. The retention defect does not permit him to fix impressions and there is a defect in the activation of past memories. As a consequence he elaborates in an entirely phantastic manner and fills in the gaps of actuality by fabrications.

The subacute reactions are not necessarily of bad prognostic omen but certainly should be viewed with suspicion if they are prolonged. Severe and prolonged infective-exhaustive-toxic states have however been seen which have continued for several months with ultimate recovery. They may be prolonged or recur if the patient has been injudicious regarding the amount of activity undertaken; rest is essential to their recovery. There may be delirious features in the early stages. The prognosis is better when there is associated unclearness. In the more severe reactions there develops a permanent memory defect. Drugs and alcoholic intoxication may bring about this type of reaction. These reactions often follow operations and acute infections in the presence of cerebral arteriosclerosis.

The chronic organic mental reaction

types are evident enough in the well marked case. It is the mild case which is sometimes difficult to establish. It is apparent that the threshold of awareness is unimpaired, the patient is clear but his retention is impaired. Sometimes patients very cleverly cover up the defect but a few simple tests will uncover the difficulty. Elaboration of gross impressions or ideas are reasonably good while those impressions or ideas on which concentration is necessary are found not to be elaborated. Attention, concentration, and the general mental capacity are impaired and a memory defect of a greater or lesser degree is present. It is generally diffuse or patchy. There will also be found a general let-down in their attitude toward personal appearance, the usual social conventions, responsibilities and moral situations.

The most usual causes are senile states which have a strikingly special type of memory defect for recent events, cerebral arteriosclerosis, brain syphilis, alcoholism, and severe and prolonged toxic disorders. Carbon monoxide poisoning which has been so frequent of late is worthy of special consideration. Following the unconscious state the patient may appear for a short time to be doing well and then it is apparent, rather abruptly, that he has changed and an acute, subacute, or chronic reaction is found to be present, any one of which ends in a chronic state of greater or lesser severity. Prognosis should always be guarded. The subsequent symptoms have been known to be deferred for as long as three months.

The alcoholic psychoses group now constitutes about 6 per cent of the first admissions to State hospitals and are again more frequent in hospitals generally. The whole alcoholic question deserves the attention of the profession not as a moral issue, but as a medical problem. To be understood it must be viewed from all angles, physiological, psychological, psychiatric, and social. Psychiatric medicine views the alcoholic disorders in two ways, one as a toxic disorder, and, two, as a functional disorder. Delirium tremens, the Korsakow states associated with polyneuritis, and the deterioration states definitely present the clinical picture of organic mental reactions which may lead to organic deterioration while the alcoholic hallucinosis and paranoias present a functional type of reaction with effects of fear. It should be pointed out, however, that early in these latter

states some elements of the organic type of reaction may be temporarily present. In the hallucinoses the patient is in touch with his surroundings. Voices threaten and accuse men patients of perversions (c. s.) and women of sexual indiscretions. The paranoid trend is prominent.

It is important to note that the onset is different in these two types. In delirium tremens the onset generally follows a period of abstinence, a trauma, or an acute somatic illness. The onset of an acute hallucinosis occurs in the course of a period of drinking and is associated with some emotional stress, loss of job, argument with wife or sweetheart, and so on. One important consideration in differentiating the two types is prognosis. Delirium tremens often results in organic deterioration while in the hallucinoses Kirby⁷ showed that at least 15 per cent of them developed dementia praecox psychoses requiring long hospital residence.

The relation of alcohol to the biogenic or functional psychiatric disorders should be borne in mind. Kirby in his study found that 7 per cent of the hallucinoses had underlying manic-depressive psychoses. Excessive drinking is often associated with the early symptoms of both manic excitements and depressions. The use of alcohol may be associated with the onset of any of the functional disorders.

The subacute alcoholic reactions and sometimes the chronic reactions are associated with confabulations and memory defects. There is found relatively little clouding and few hallucinations although there may be fluctuations in which there may be delirious episodes.

The chronic alcoholic reactions resemble other types of chronic organic reactions with the greater defect in the field of moral judgments. There may be slight memory defects or marked memory defects and gross fabrications associated with polyneuritis.

In all of the organic reaction types it is apparent that there are always several etiological factors at work. In addition to the outstanding causes are auto-intoxication and dehydration. These are produced by failure to receive sufficient nourishment and fluids, failure to keep the gastrointestinal tract functioning, and not to be omitted are sedative drugs given to combat noise and restlessness. The general physician is unfortunately not so prompt to resort to tube feeding as the psychiatrist.

In turning to the functional disorders it is found that they make up about two-thirds of the resident population in State hospitals and about 50 per cent of the yearly first admissions. Notwithstanding this great problem the question of diagnosis and treatment of the so-called nervous or neurotic cases alone or in association with somatic disease is of greater interest to physicians than other types. This must necessarily be so because of their large incidence as shown by Ziegler, Moersch, and the survey of the National Committee for Mental Hygiene. These studies indicated 20 to 40 per cent of patients seen presented psychiatric problems.

In this connection it must not be inferred as the author has pointed out elsewhere⁸ that there is a fundamental difference between the severe or mental and the mild or nervous disorders. The difference lies in the mechanisms of their development.

In evaluating the signs and symptoms of a given case it is essential that a careful study⁸ be made of the constitution and the total life reactions of the patient. Snap diagnoses are sure to lead to errors. Psychiatric disorders are not simple but complex in their makeup. On the other hand by careful scrutiny of the symptoms and mechanisms they can, by and large, be generally diagnosed and treated with reasonable success.

Functional or biogenetic disorders may be, for purposes of consideration, separated into two groups: The emotional reactions, and the substitution reactions. The formal classification of the various disorders will not be considered here as they may be found in any good textbook on psychiatry.⁹

Emotion may be looked upon as the feeling one experiences and its expression. Mood and affect are terms generally used synonymously. Sometimes mood is used referring to the feelings and affect to the expression of the mood. Affect is also used in the sense of the feeling tone of the idea or situation. Elation, depression, and fear with their variations are the usual affects. The most common emotional mechanisms are elation, depression, anxiety, anger, and fault-finding states. They not only concern the feelings but also the reactions of the personality which involve feeling, action, and thinking. These are not different from natural expression of feelings except when they become exaggerated or pathological.

The elated mechanism shows the patient not only to be feeling good, but he feels over-good and out of proportion to the situation: his eyes are brighter, he speaks more, he gestures more, his field of interest becomes enlarged and he takes in more; he functions easily, his appetite is good, his gastrointestinal tract functions¹⁰ satisfactorily, he is alert and quick and he coordinates well; his face is flushed and he has a physiological feeling of warmth and a psychological feeling of well-being with nothing impossible. The step from high spirits, vivaciousness, and exhilaration to a pathological emotional reaction is short and may be overreached easily.

In the depressed reaction the opposite clinical picture is seen: the patient is blue and sad, or says he has no feeling; he is not as alert as usual and is quiet and talks and moves about less; his field of interest is narrowed and he is slow in both speech and action. His appetite is not good, he complains of fullness in the stomach and abdomen and constipation; headache and tightness are not unusual; he appears pale, does not feel well, and tires easily. He has lost his "pep"; he feels inadequate, uncertain and pessimistic, and even self-depreciatory. Suicidal attempts are frequent.

In the anxiety reaction the patient is anxious, worried, and generally restless. There is a tendency to talk and to unload with harping, and there is a narrowing of interests. Other patients may talk less and appear stunned. Here too we find loss of appetite, constipation, dryness of the skin and mucous membranes, and uncomfortable feelings in the region of the heart and even slight acceleration of the pulse. There may be complaints in the region of any organs of the body.

In the fault-finding reaction the patient appears uncomfortable and dissatisfied. There is the appearance of uncomfortable emotional tension with talkativeness and tendency to unload and have it out. There is a diffusion of interest in that everything and anything or anybody in the environment will be harped upon and complained of. The patient is generally out of sorts.

The anger reaction is a shorter and episodic reaction. The physiological and psychological picture of the angry man is familiar to all. The psychopathological interest is in the recurrence of these episodes without adequate cause and the lack of control manifested.

In the substitution reaction is found split-

ting of the psyche. Complexes or groups of ideas with their affects or feelings are separated off from the rest of the psyche. They appear in one way or another as symptoms. These complexes may appear in the form of hallucinations, paranoid and fantastic delusions, obsessions, compulsions, and hypochondriasis. Scattered and stilted talk may be present. Apathy, exaltation in contradistinction to a feeling of exhilaration of the emotional reaction, and aggressiveness take the place of normal or more salutary reactions. The symptoms may be formulated into types or reactions.

The schizophrenic or schizoid reaction type or mechanism is characterized by a change in attitude toward reality and the problems of responsibilities of life. There is a loss of interest, an impaired emotional reaction, absorption of interest in the inner life, day-dreaming and ruminating, and finally hallucinations, delusions, changes in stream of talk, with reactions of apathy, exaltation, aggression, stupor, and in specific and direct relation to their delusions. Strange and queer behavior is common. The early stages of this reaction are often not recognized until some bizarre conduct has developed or until the physician after dealing with the hypochondriacal complaints comes to see them as delusions. Not all of these cases progress rapidly nor do they all develop into severe psychoses and states of deterioration. It is advisable to keep in mind that there is always present the possibility of a severe reaction in the form of a sudden acute episode. On the other hand many of these cases live outside of hospitals as limited but productive individuals. In milder and acute cases there are gastrointestinal complaints with spastic constipation.

The paranoid reaction is seen frequently and may vary in degree from suspiciousness to paranoid or expansive delusions of ability and authority. Paranoid patients may have indefinite feelings of changes in people's attitude toward them or in their bodies. The manner may be one of condescension or superiority. Advice is sought but seldom followed and is generally viewed with suspicion. These patients consult physicians for their change of feelings and are nervous and letdown.

The hypochondriacal reaction presents many bodily complaints which are elaborated beyond the usual somatic syndromes met with. The usual physical signs of somatic disease are absent and frequent

examinations tend to fix and elaborate the complaints. Peculiar eating habits are often present. Close study of the complaints show certain bizarre features. There is also found a certain lack of affect and reality to the total picture presented. The case may progress to a well defined and severe psychosis but this is not the rule. These patients consult many physicians and quacks and take up religious, nature, and other cures.

The psychasthenic reaction presents obsessive, compulsive and somatic symptoms and feelings of weakness, but always in a setting of emotional or affective inadequacy. Feelings of uncertainty and unreality are common.

Hysterical reactions and anxiety neuroses are here considered separately from the psychasthenic reaction. Hysterical reactions are manifold in their manifestations and are familiar to all. Fugues, somnambulistic states, dreams or delirious states and conversion symptoms with their somatic manifestations are the most common. For the present consideration the dreamlike or delirious states and the conversion phenomena are the most important.

Delirium in the sense of an organic reaction is conditioned upon an inability to apprehend, and clinically the post-delirious state presents a temporal or time defect in memory. The hysterical delirium is conditioned upon a state of complex disassociation and the post-delirious state presents a topical or subject defect in memory—rarely is time involved. The trend in the former is scattered and has to do with habitual experience. In the latter the trend has to do with an unpleasant or painful subject or situation. Accompanying the conversion somatic symptoms are the typical hysterical stigmata. The somatic symptoms are not anatomically circumscribed; either they are too limited or too diffuse to conform with the structural relation of the body. The disassociated complex in hysteria is complete with its affect which is not bizarre and appears more natural. In schizophrenia the whole picture is peculiar and unreal. It is the conversion symptoms of the internal organs, heart, and gastrointestinal tract, and so on, which especially give physicians trouble. Many of these patients undergo much unnecessary treatment and many unnecessary operations. It is only by a careful study of the history of the patient and his personality that the case becomes clear.

The anxiety neurotic type of reaction is generally looked upon as one of the psychoneurotic group to which hysteria belongs. It seems best to discuss it separately. The clinical picture is one of fear of something impending, losing the mind, tumors or other somatic diseases; of feelings of depression, irritability and inability to concentrate or undertake things. There are no parts of the body exempt from representation in the somatic clinical picture. Palpitation, precordial pain, shortness of breath, abdominal distension, flatulence, constipation and diarrhea, spots before eyes, ringing in ears, tremors, perspiration, frequent urination, dizziness, and paresthesias are some of the common complaints. The patients' cases are often diagnosed as having somatic disorders or as "cardiac neuroses," and so on. In their less apprehensive states with the greater emphasis on the somatic symptoms they present problems to the practitioner which are not easily solved. In the end a careful study has to be made of the history and personality of the patient before an accurate diagnosis can be arrived at.

In considering the syndromes presented it is important that the physician should bear in mind the great variability of the symptoms; the possibility of atypical clinical pictures; and also that symptoms of more than one syndrome may be present at the same time and produce a mixed picture—this latter is especially true of the occurrence of organic and functional syndromes; and that the personality of the patient also plays a great part in modifying the clinical picture.

The purpose of this paper has been to call the attention of the general practitioner to some of the formulations of psychiatric medicine which may be helpful in the study of his cases. Too often psychiatric problems are observed, discussed, and managed in a superficial hit-and-miss fashion. Psychiatry like metabolism and immunity, among other fields of medicine, has developed a terminology of its own. This does not mean that it cannot be readily grasped by those in other branches of medicine, that it is loosely conceived or vaguely formulated, or that it cannot be discussed in simple every-day language. It is true that there are many questions we cannot answer; the same may be said of immunity. It is equally true that there is a large body of psychiatric knowledge that is readily available and practically helpful

for those who will take the time to look into it and to study their cases in the light of the knowledge available.

Psychiatry has made a great contribution to medicine. It was the first of the medical disciplines to accept, to put to the test, and to establish on a practical basis the principle of biogenesis as applied to medicine. If the physician will apply this principle to his nervous and mental cases as the author has pointed out elsewhere⁸ his facility in understanding his patients will be materially increased. The fact that man does not function as a summation of

parts but as an integrated whole¹¹ is worthy of meditation.

This presentation has been brief and limited to some of the more important formulated reaction types of psychiatric medicine. Etiology, psychological mechanisms of development, and treatment have not been discussed because of the limited time available.

To those who may be interested in following up this discussion, the studies of Cannon,¹² Hoch,¹³ Bleuler,¹⁴ Zilboorg,¹⁵ and Jamieson and Wall,¹⁶ are especially recommended. 121 WESTCHESTER AVENUE

References

1. Van Itten Nathan D. An Economic Prospect for the Physician. Read before the Medical Society of the County of Westchester, November 21, 1933.
2. New York State Department of Mental Hygiene, Annual Report, 1932.
3. Ziegler, Lloyd. Mental Hygiene and its Relation to the Medical Profession, *J A M A* 97 1119, 1931.
4. National Committee for Mental Hygiene, Summary of Opinions of Leading Physicians concerning Importance of Mental and Environmental Factors of the General Run of Medical Patients, Private Communication.
5. Moersch, Frederick P. Psychiatry in Medicine, *Am J Psychiat* 11 831, 1932.
6. The John Price Jones Corporation. Survey and Analysis Prepared as a Basis for Plans to Improve Public Opinion of Bloomingdale Hospital and of Mental Hospitals in General 1933, Privately printed.
7. Kirby, George H. Alcoholic Hallucinoses, with Special Reference to Prognosis and Reaction to other Psychoses, *Psychiatric Bull* 9 353, 1916.
8. Raynor, Mortimer W. The Psychiatric Approach of the Practitioner to His Patients, *Bull N Y Acad Med* 9 130, 1933.
9. Henderson D K and Gillespie R D. *A Text Book of Psychiatry*, Oxford University Press, Edinburgh 1927.
10. Henry, George W. Gastrointestinal Motor Functions in Manic Depressive Psychoses, Roentgenological Observations, *Am J Psychiat* 11 19, 1931, Gastrointestinal Functions in Schizophrenia, *Am J Psychiat* 7 135, 1927.
11. Meyer, Adolf. Salmon Memorial Lectures, The N Y Acad Med, 1931 (To be published).
12. Cannon, Walter B. *Changes in Pain Hunger Fear and Rage*, D Appleton and Co., New York, 1929.
13. Hoch, August. A Study of Some Cases of Delirium Produced by Drugs, *Studies in Psychiatry*, New York Psychiatric Society 1 1912.
14. Bleuler, Eugen. *Text Book of Psychiatry* translated by A Brill, Macmillan, New York, 1924.
15. Zilboorg, Gregory. A Psychosis Caused by a Latent Focus of Infection (Ischio-rectal abscess), *N Y J Med* 27 714, 1927.
16. Jamieson, Gerald, and Wall, James H. Toxic States as Complications in Functional Psychoses. Etiology and Treatment, *Psychiat Quart* 4 263, 1930.

CHIROPRACTORS BROUGHT TO JUSTICE

A drive against chiropractic schools is being made by the State Department of Education, on the charge of issuing degrees without sanction from the Legislature or the regents, in violation of the law. The officials of one school have pleaded guilty and are under suspended sentence, and the cases of two other schools will come up shortly.

In addition to prosecuting the schools an active campaign is now under way against individual practicing chiropractors, it is said. Chiropractors, of course, are not licensed in New York and the Court of Appeals has held that the practice of Chiropractic is the practice of medicine and that those who engage in it as the practice of medicine do so illegally. The offense is a misdemeanor and carries with it the penalties of one year in jail or not more than \$500 fine, or both. Individual practitioners at the rate of ten or twelve per month are now being arrested and brought to trial through the work of

the bureau headed by Sol Ullman, Assistant Attorney General in charge of the investigation of illegal practice of medicine and dentistry.

The decision of City Judge Jacob A. Bernstein of Mount Vernon upholding the constitutionality of the law has attracted wide notice and was cited in a recent article in THE NEW YORK STATE JOURNAL OF MEDICINE.

THE DOCTOR'S PRESTIGE

Dr. George W. Hartmann, of Pennsylvania State College, interviewed 450 persons in various walks of life and asked how they rated different occupations in the matter of prestige. This is how he found them to stand in public esteem: First, physician, then United States Senator, professor, lawyer, civil engineer, dentist, clergyman, high-school teacher, factory manager, merchant, salesman, nurse, actor, mail carrier, garage mechanic, tailor, bricklayer, baker, policeman, plumber, miner, barber, cook and fisherman.

THE PROBLEM OF ACUTE APPENDICITIS IN NEW YORK CITY

SHEPARD KRECII, M.D.

NEW YORK CITY

Introduction

Vast quantities of words have been written and spoken about acute appendicitis. We have had it paraded before us in medical literature and discussed repeatedly at medical meetings. It has become such a common part of our professional diet that we have lost our taste for it. We shrug our shoulders and accept it as an inevitable evil. We wonder what more can possibly be said about it, and we go to medical meetings with a feeling of resentment and boredom that we are asked to listen to just another paper on appendicitis. But when we hear that the operative mortality of acute appendicitis in fourteen representative New York hospitals was 7 per cent in 1921 and only one-tenth of one per cent less in 1931, we may agree that the time has not yet come to dismiss the subject. On the contrary, it is ripe for a united and constructive effort on the part of the medical profession of New York toward correcting this condition.

Some time before his death, Dr. Linsly Williams, Director of the New York Academy of Medicine, suggested that a survey on acute appendicitis, similar to those that have been conducted in other cities, should be undertaken. It is with deference to his wishes and respect to his memory that I offer you this survey.

General Consideration of Incidence and Mortality of Appendicitis

In 1927 Dr. J. V. De Porte, Director of the Division of Vital Statistics in the New York State Department of Health, undertook a "Sickness Survey" of rural New York. His findings are based on weekly reports received over a period of one year from 107 physicians in 33 counties serving a total population of about 100,000. Each physician agreed to report only new cases as they were seen for the first time. No subsequent visits were reported. It is an interesting side-light on the rural incidence of certain diseases:

Measles	1201
Bright's Disease	1134
Appendicitis	966
Gonorrhea and Syphilis.....	908
Chicken-pox and Whooping Cough.....	882
Scarlet Fever and Pneumonia.....	566
Diabetes	505
Cancer (all forms).....	464

The report does not state how many of these cases of appendicitis were of the chronic type, or how many came to operation. But at least it shows that the diagnosis is made with astonishing frequency, and is a fair indication of the prevalence of appendicitis.

The concentrated attention of the Medical Profession, the Department of Health, and the laity in New York City has been directed for many years against the contagious diseases. The result has been a very marked reduction in the number of deaths from these causes. The Health Department figures show that in 1920 there were 2,876 deaths from the following six contagious diseases: Measles, Whooping-cough, Scarlet-fever, Diphtheria, Typhoid-fever, and Epidemic Meningitis. In 1933 there were 629 deaths from these same diseases. This represents a reduction of 78 per cent. The number of deaths from appendicitis, however, has shown a gradual rise during the same period from 792 to 1,149, an increase of 45 per cent. (See Chart I.)

In 1930, 1931, and 1932—the period covered by the Maternal Mortality Survey conducted by the New York Academy of Medicine) there were 2,041 deaths from puerperal causes registered with the New York City Department of Health. In the same period there were 3,333 deaths from appendicitis.

The reduction in the mortality (deaths per 100,000 of population) of Diphtheria and Tuberculosis is compared with the rise in the mortality of Appendicitis. (See Chart II.) Diphtheria and Tuberculosis have been the objects of a well-organized attack on the part of the medical profession, health officials, and the

Read before the New York Academy of Medicine, November 8, 1934. By special arrangement this article appears also in the Bulletin of the New York Academy of Medicine for March, 1934

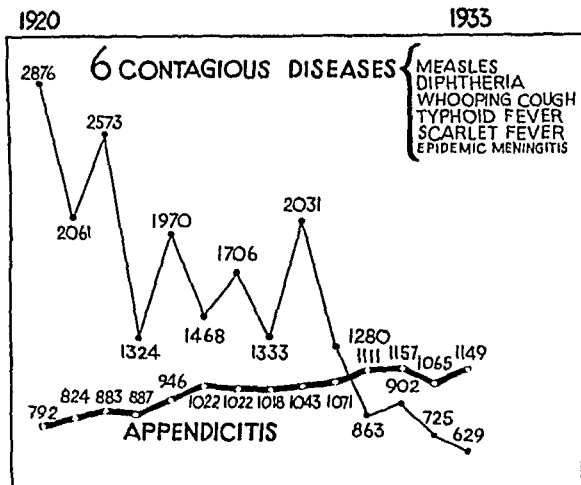


CHART I.—Numbers of deaths in Greater New York City from six contagious diseases, and from appendicitis, 1920-33.

laity. Appendicitis has not. These figures are taken from the actual death certificates, which implies an accuracy of diagnosis which is not without a factor of human error. However, the general trend is obvious, and lacking any other better method of obtaining this information, they must do for the present. The fact remains that appendicitis is a common condition and its mortality in New York City is too high.

The Survey

The rest of this paper will be devoted to an analysis of 4,542 cases of acute appendicitis, prepared from a personal study of each individual chart in the record rooms of fourteen hospitals in Manhattan. An attempt has been made to draw a ten-year comparison between the years 1921 and 1931. In a few instances hospital records were not available for 1921, so the nearest subsequent year was taken in order to carry out the comparison. Unfortunately there has not been time to bring this record up through 1933, as the work was started in 1932 and only recently finished. I wish to thank the directors of surgery, the superintendents and the record room employees of these hospitals for their cordial reception, and

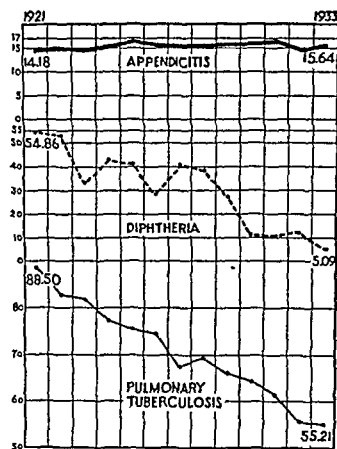


CHART II.—Comparative mortality per 100,000 population of appendicitis, diphtheria, and pulmonary tuberculosis in New York City from 1921 to 1933. The New York City Health Department bases its rate of diphtheria on the number of deaths per 100,000 under 15 years of age.

to say that in no instance was any diplomatic difficulty encountered. The following hospitals cooperated in this work: Bellevue, Beekman Street, Broad Street, French, Harlem, Lenox Hill, Mt. Sinai, New York, Polyclinic, Post-Graduate,

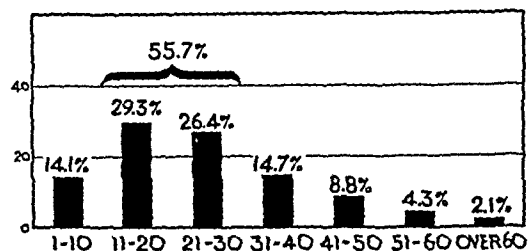


CHART III.—Age incidence of acute appendicitis in 14 New York hospitals for 1921 and 1931 combined.

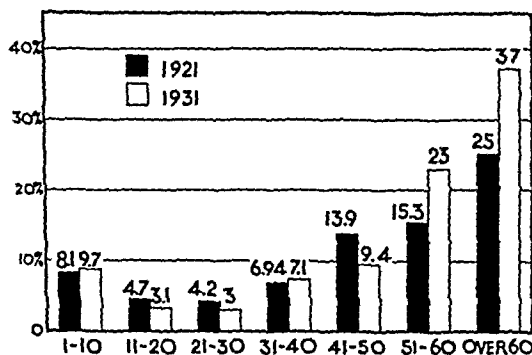


CHART IV.—Comparative mortality as to age in 1921 and 1931.

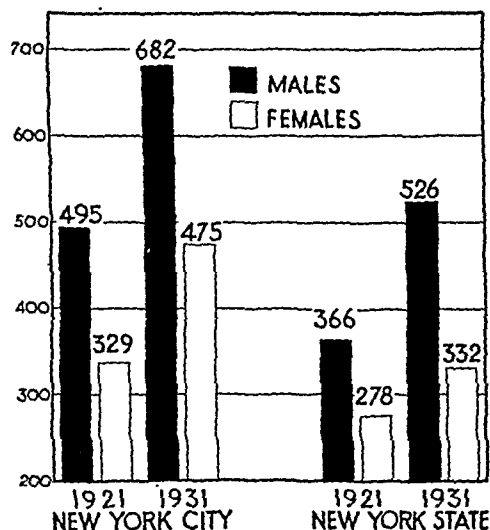


CHART V.—Numbers of deaths from all forms of appendicitis as based on figures supplied by the Health Departments of the City and State of New York.

Presbyterian, Roosevelt, St. Luke's and St. Vincent's. This is obviously a representative list of the Grade A hospitals, and the result in these hospitals might fairly be expected to be somewhat above the average for the whole city.

Only those cases of acute appendicitis in which the diagnosis was certain beyond any reasonable doubt have been included. Many cases were rejected in which the operative description or pathological findings were unconvincing. No cases of so-called chronic or sub-acute appendicitis were included, nor were any of those which were operated on during the interval between attacks. In 1921 2,208 cases were operated upon in these 14 hospitals. In 1931, 2,334. In some of the following statistical charts the two years have been combined because the figures of either year were of no particular significance from a comparative standpoint.

Age Incidence and Age Mortality

There was a variation of less than 1 per cent throughout in the age incidence in the two years, and therefore they are charted as one. In 29 cases the age was not recorded on the charts. There is nothing particularly interesting here except further evidence that acute appendicitis is primarily a condition of youth and young adult life, nearly 56 per cent of all cases occurring in the second and third decades. (See Chart III.)

The comparative mortality according to age, on the other hand, is of some interest, because it shows in 1931 a marked increase over 1921 in the older age groups. This might be accounted for on the basis that people over 50 have been unable to throw off the ill effects of unemployment and economic stress as well as the younger groups have, and have suffered an attack of appendicitis in a condition of comparatively greater lowered resistance. (See Chart IV.)

Sex Incidence and Sex Mortality

The incidence according to sex checks pretty well with other authors—68 per cent males—34 per cent females. The mortality according to sex is a different story. The Health Department figures for the City in 1921 show 495 deaths among men and 329 among women, and in 1931, 682 among men and 475 among women. In the rest of the State the same relative picture holds true. This chart gives us a

good picture of the increase in the number of deaths in both sexes during the 10-year period in both City and State. The actual mortality among men was slightly higher than that among women (7.2 per cent and 6.8 per cent in the hospitals studied. (See Chart V.)

Seasonal Variation

The question of seasonal variation has been discussed by others. This chart is based on only 2,672 cases. It is difficult to explain the marked rise during the month of March. Most of us, however, have probably observed in our hospital work the later rise that occurs during the summer months. The curve seems to follow somewhat the curve of exacerbation of peptic ulcer. There are some who might offer it as evidence in favor of the bacterial theory of the etiology of ulcer. At least we are all familiar with the apparent clinical association that exists between symptoms of peptic ulcer and a pathological appendix. Seasonal variation is a matter which would bear further study. (See Chart VI.)

Previous Attacks

The question of previous similar attacks was studied with the hope that it might cast some light on the attitude of mind of the public. If it could be demonstrated that in 1931 more patients sought admission in hospitals during their first attack of abdominal pain than was the case in 1921, it might be favorably construed as a step forward. Here we are confronted with a discouraging surprise. In 1921 40 per cent of the hospital charts contained no information about previous attacks, and in 1931 nearly 45 per cent.

Discarding all charts that contained no information, we find that in 1931 fewer patients were admitted during their first attacks than in 1921—46.4 per cent as against 48.7 per cent. This can hardly be construed as evidence that the public has become more "appendix minded."

Cathartics

I hesitate to present any figures on cathartics because of a woeful lack of information. In 1921 69 per cent of the hospital charts were completely lacking in any mention of catharsis, and in 1931, 63 per cent. Again in 1921 such information as was given was incomplete in 20 per cent of the charts, and in 1931 16 per

cent. We are, therefore, reduced to such a small number of cases in which this information was complete—230 in 1921 and 468 in 1931—that any conclusions would be of little value. No attempt was made to compare the mortality in the "cathartic patients" with that in the "non-cathartic" group because of this incomplete information. Nor was it possible to answer many other important questions in this category, such as: Where lay the responsibility for prescribing cathartics? What kinds predominated? What was the effect on the symptoms, and what apparent relation did catharsis bear to the pathology found at operation and the subsequent course of the illness?

There are some who still feel that too much emphasis has been laid on the whole question of catharsis. The anti-cathartic campaign that has been waged in Philadelphia is now familiar to all. Several years ago the County Medical Society there sent out 300,000 stickers to 3,813 physicians to be attached to their monthly bills. The sticker read:

"Warning—In the presence of abdominal pain never give a laxative. Give nothing by mouth. Apply ice-cap or hot water-bottle. Call your family physician. Abdominal pain which lasts over six hours is usually serious. This warning is published by the Philadelphia County Medical Society and endorsed by the Department of Public Health."

Further propaganda was launched through the press, radio, retail drug stores, and in the class-rooms of the public schools. Bower believes that the creditable reduction in the mortality of acute appendicitis in Philadelphia has been due in some measure to this anti-cathartic cam-

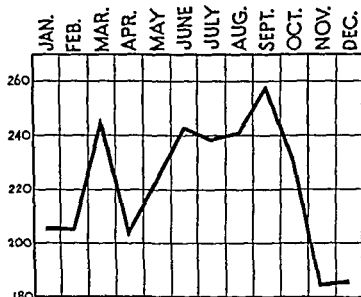


CHART VI—Seasonal variation of acute appendicitis in 2672 cases

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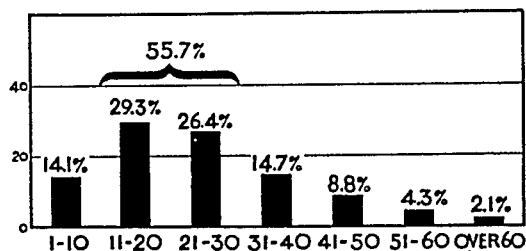


CHART III.—Age incidence of acute appendicitis in 14 New York hospitals for 1921 and 1931 combined.

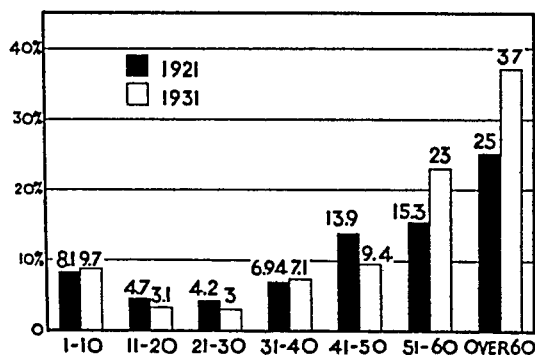


CHART IV.—Comparative mortality as to age in 1921 and 1931.

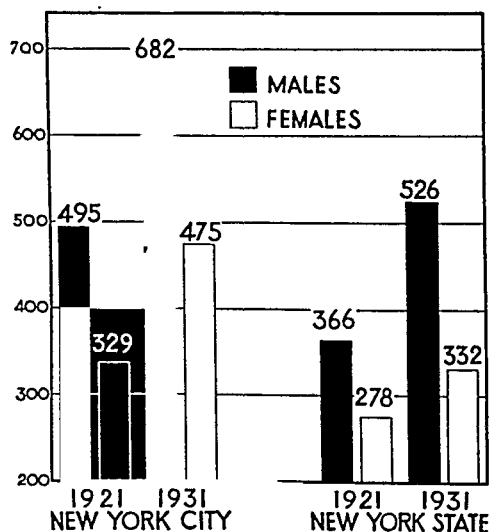


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appendicitis. If it were possible to have complete information and to devote more time to a painstaking study, we would also find here the true evidence of the skill and judgment of the individual surgeon. The removal of an early acute appendix is ordinarily a fairly simple procedure. But there is not a single surgeon here tonight who has not had his technical ability, patience, and judgment taxed to their limits by the difficult appendix that is complicated by an abscess or peritonitis. It is only through these trying and bitter experiences that we learn to develop a humble and wholesome respect for this small but dynamic organ.

In studying the individual charts from the pathological angle the difficulty of interpreting the operative findings of others was impressive. But an honest effort has been made to do this with an open mind, and to classify each case as fairly and accurately as possible. I admit a considerable factor of human error, but at least it is a constant one, due entirely to the interpretations of a single individual.

I have followed the pathological classification in use at the Presbyterian and a few other hospitals. There are 5 groups: 1. Acute appendicitis (uncomplicated), 2. Acute appendicitis with acute local peritonitis, 3. Acute appendicitis with peritoneal abscess, 4. Acute appendicitis with acute diffuse peritonitis, 5. Acute appendicitis with progressive fibrino purulent peritonitis. (See Chart X.)

1 Acute Appendicitis (Uncomplicated)
The first group is simple and clear cut. The pathological picture may vary from the appendix which shows injection of the serosal surface, edema of its coats, invasion by polymorphonuclear leukocytes and erosion of the mucosa, to one of advanced gangrene. But only if the process has remained entirely limited to the appendix has the case been classified in this group. The presence of clear peritoneal fluid has not been interpreted per se as peritonitis. As might be expected, the great majority falls into this group.

2 Acute Appendicitis with Acute Localized Peritonitis
Here the pathological process has escaped beyond the confines of the appendix itself. We find the deposition of plaques of fibrin about the appendix, cecum, and possibly neighboring intestinal loops. The omentum will probably be involved in the inflammatory

process in its ever watchful role of guardian of the peritoneal cavity. The wall of the cecum and nearest loops of small intestine will be injected and somewhat dilated, and there may be some clear or turbid or even frankly purulent fluid in the vicinity.

3 Acute Appendicitis with Peritoneal Abscess
This classification is simple if we merely bear in mind just what an abscess is. Here there will be a circumscribed collection of pus, usually of foul odor, maybe a few drops or maybe many ounces. It will be completely walled off from the rest of the peritoneal cavity. The appendix will probably be found in the abscess cavity or one of its walls. These walls will be composed of different structures depending on the location of the abscess. They are the result of a local peritonitis. They are the brick and mortar produced by the peritoneum and omentum.

4 Acute Appendicitis with Acute Diffuse Peritonitis
In attempting to allocate cases to this 4th group I have tried to bear in mind constantly the definition made by Dr. Joseph Blake in 1903, and recently revived by Potter: "By diffuse peritonitis I mean an established progressive inflammation without definite limitations, evidenced by extensive redness of the peritoneum, a definite inflammatory exudate, a tendency to general involvement and intestinal paralysis."

There are some who prefer the term "spreading peritonitis." Is not the whole process of acute appendicitis from its onset a constantly spreading and

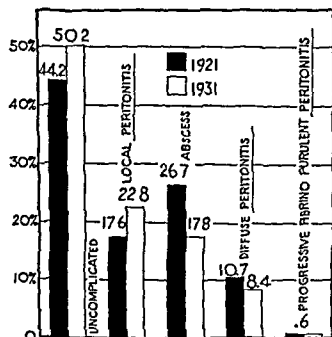


CHART X—Incidence of pathological types

full of pus, the dilated paralyzed intestines, and feel the failing pulse of the patient who has spent several days with an icebag on his right lower quadrant. One does not learn by listening to words. Our strongest impressions are created by actual observations. What really counts is the practical and tragic experience of seeing these patients on the edge of the grave.

950 PARK AVENUE

Discussion

DR. WILLIAM W. HERRICK (New York City): Dr. Krech deserves a great deal of credit for the completion and for the clear and convincing presentation of a very important task. Faced with the fact that the mortality from acute appendicitis in our more representative hospitals is 7 per cent, we must realize that the mortality in the community at large is probably higher. In appendicitis we have a disease which, with ordinary diagnostic and surgical skill, is presumably remediable, and yet appendicitis has a mortality quite as high as that of enteric fever, a disease for which we have no remedy. This state of affairs, indeed, deserves a searching of method on the part of those who teach medicine, of those who practice medicine and of those who are practiced upon.

I am sure that as a student and as an interne, I had no adequate instruction in the dangers of abdominal pain or in the care essential in its management. Teachers of medicine are but human. We tend often unconsciously to suppress our errors of diagnosis and of operative judgment and technic, when those errors should be exploited for the benefit of the student. In every senior medical course and in every hospital particular emphasis should be laid upon mistakes in diagnosis and upon their clinical and the pathological aftermath.

Another factor in the mortality of appendicitis is the common practice of making too few house calls. It was the practice of an earlier day to see the patient with any acute condition daily, or perhaps twice a day. Now with the economic pressure, the patient does not crave the medical attention that he used to, neither does the physician wish to force upon the hard-pressed patient services which he thinks may not be necessary. The physician is inclined to leave some of the responsibility on the patient, to say: "If you are not all right tomorrow, let me know and I will come again." In the question of an acute abdominal disorder, such an attitude may mean disaster. A way to avoid this is to enforce early hospitalization of cases of the acute abdomen which cannot be provided with adequate facilities for care at home, a

care which may include hourly observation, with appropriate laboratory procedures.

Another source of danger is in our own processes of reasoning. These brave many possibilities of error. The method of logic which we so often must apply in diagnosis, "per exclusionem in ordine," is so beset by error that frequently the single mind endeavoring to make a diagnosis goes astray. I believe it was Sydenham who said that there are times when one's faculties are holden from him; that is, when the fine coordination of brain and sense and hand is not operative at an efficient pitch and, when through fatigue or what you will, mistakes of observation and of interpretation and of judgment creep in.

In diagnosis of abdominal pains such a situation can be shunned by the consultation. The surgeon and the medical man should share the responsibility for the diagnosis of the acute abdomen.

On the side of the laity, I think there has been an increasing, shall I say, disrespect for appendicitis. The average citizen considers it a fairly simple, straightforward matter, one that can be remedied by almost any surgeon. He is a little lax in sending for his physician and in the use of cathartics. Some attempt to re-educate the laity along these lines seems desirable.

Again the public should recognize one point of utmost importance, namely, that an appendectomy, while it may be a very simple operation, can be one of the most complex and difficult procedures, demanding all the skill and resource of the surgeon. Appendectomy should be entrusted only to surgeons thoroughly competent. A rule enforced by some appropriate organization should provide that major surgery of this type be done only by those thoroughly qualified by training and experience. I would like to sum up the medical point of view by saying that there should be more adequate instruction in the subject of abdominal pain, and in the results of mistakes in its diagnosis and treatment. More frequent visits should be made in the home when the acute abdomen is under consideration. Each case of abdominal pain should have the benefit of both the medical and the surgical consultation. Early hospitalization of cases of this kind should be enforced, the laity instructed in the dangers of acute appendicitis and in the necessity of placing its management in the most competent of surgical hands.

DR. JOHN A. HARTWELL (New York City): Mr. President, Dr. Krech, Dr. Parman, Fellow Guests of the Academy: I am afraid that I shall speak more as one who is retired from the practice of surgery than from an active surgeon's viewpoint. First, I wish to comment upon the fact that the Academy possibly felt a little too chastened

over a recent experience that was connected with a similar study to this called the Study on Maternal Mortality. There were certain events connected with that which left an undying impression upon the minds of those of us who took part in it.

I rather regret that we did not advise Dr. Krech to entitle his paper, "The Problem of Acute Appendicitis in New York City—An Outgrowth of the Study on Maternal Mortality, A Challenge by the Obstetricians to the Physicians and the Surgeons," and then I think we would have had this hall filled; particularly if we had released this paper to the press, and it had appeared on the front page of all the papers this morning as: "One out of every fourteen cases of acute appendicitis dies. What are the surgeons going to do about it?"—or something of that sort.

We were severely criticized for the maternal mortality report because it did get out. It was not intentionally that this was done, but a good many of us feel that it has been a good thing because it did attract attention, and also it aroused the obstetrical portion of the profession to the fact that something should be done about it.

It is incumbent upon the Academy to see that this work yields results, for when 1,100 persons die in this city of appendicitis every year, it is a matter of major importance and becomes pretty nearly a public health problem. And when we find, as we do, that the death rate is constantly rising from it in spite of the fact that patients have come earlier in 1931 than they did in 1921, it shows we are not going to conquer the problem entirely by getting all the people to come to the surgeons earlier. There is another element in it. And when we realize that when one is past the age of fifty, though it is rare that he has appendicitis, his chances of living are only about three in four, it is a very serious problem.

Too, as Dr. Herrick pointed out, it should be remembered that these statistics are taken from fourteen of the graded A hospitals and probably represent the highest type of treatment.

We don't know what the minimum death rate of acute appendicitis ought to be, but we do know that 7 per cent is too high, just as we know that the maternal mortality rate was too high. Since that report was published, definite steps have been taken to see that an improvement has been made in which the Department of Health is taking a part by having appointed an Advisory Obstetrical Council. This council is now engaged in studying the recommendations contained in the Academy report and endeavoring to put them into practice.

Another factor that Dr. Krech brought out is that the records, even in our best hospitals, are not as good as they should be. We do

not like to emphasize that because these hospitals were very courteous and co-operative in giving every opportunity to Dr. Krech to study their records, but at the same time they like to know where they may profit and it is our experience that the hospitals eagerly accept any knowledge that will be of benefit.

It was very apparent that the uncomplicated pathological process ran parallel in each instance to the earliness with which the patient came to the operating room. Early, the disease is a comparatively simple problem in the majority of instances, but even here there is enough trouble to cause a very considerable death rate.

The total number of cases was about 4,500 in the two years, a little over 2,000 in each year. That is a goodly number to make a careful study of.

What can we do about it? How can we proceed? We obviously can't proceed unless we can arouse interest. In the case of maternal mortality, we have to acknowledge, frankly, the profession was driven by the laity. The report came out and it was largely instigated by lay organizations and the profession was aroused only when the situation was emphatically called to their attention.

If an undesirable condition exists in appendicitis, it probably exists in a great many other surgical conditions. If we are satisfied with any bad condition that exists, we don't get any further. There are apparently many unnecessary deaths from appendicitis and it is certainly the duty of the profession to see that those unnecessary deaths do not occur.

Dr. Krech has made one specific suggestion as to how we should proceed; namely, that we ask all the hospitals to co-operate in an intensive study of the condition of appendicitis, keep their records fully and have those records analyzed by an impartial and carefully selected committee and reported upon to see exactly where there are factors that have been responsible for death that might be eliminated.

There are, somewhere along the line, elements that we may get rid of if we know all the facts and everybody's mind is intent upon it, and when there are 1,100 persons each year dying in this city of this disease and when the mortality in the acute condition rises as high as 7 per cent, we certainly should take steps to see that improvement occurs.

How shall we proceed to do this? Well, I suggest, Mr. President, that since the Academy has introduced the subject—and it really has been an outgrowth of the report on maternal mortality—that the Academy take upon itself the responsibility, through one of its committees, to launch a study of this disease and possibly other surgical conditions along the same intensive lines that

the study of maternal mortality took, and learn wherein we can improve the situation. It is not worth while to do the hard work that Dr. Krech has done over two years, possibly longer, with the co-operation of fourteen hospitals and then have the paper simply filed away and forgotten. Such a work is only justified if it lead to some effort to improve the conditions that it describes, and I trust that the Academy will seriously recognize its responsibility and lead towards setting up a procedure such as Dr. Krech describes in the paper for making the intensive study that is necessary to be made.

For example, why did some 30 to 40 per cent of these patients get to the operating room only on the third and fourth day? Was it because they didn't inform anybody that they were ill? Was it because of the difficulties, the inherent difficulties of diagnosis, which is perfectly possible? Was it because someone in the line was careless, didn't take trouble enough to find out the situation? What were the factors that led to delay?

Again, what were the factors that caused the deaths in the cases where there was a local abscess, a condition that, as Dr. Krech pointed out, ordinarily is fairly easily dealt with, but in some instances may tax the best surgeon's ability? A complete analysis of that sort should lead to an improvement in the situation, and unless we accept that responsibility, I do not feel that we have done our full duty.

I wish to thank Dr. Krech in the name of the Academy for having undertaken this work and pushed it forward to this extent and made the suggestion that we go on with it.

DR. THOMAS PARRAN, JR. (Albany): Mr. President, Dr. Krech, Fellow Members of the Academy: In the very cryptic statement of Dr. Krech as to the reasons why he undertook this study, I think very few of us have appreciated the enormous work involved. When we consider the task which he undertook some three years ago of analyzing the raw data from these fourteen hospitals, of classifying and transcribing and interpreting these data, it is very difficult to appreciate the extent of the contribution he has made.

Many of us are familiar with statistical studies carried out by organizations of one sort or another, but it is quite rare, I think, to find a physician in practice, a surgeon, who has the time, the inclination, the ability and the energy to lift his eyes from the scalpel to the community problem with which he is dealing, and attempt to answer some questions in relation to it. This Dr. Krech has done with appendicitis in this city.

I think none of us should mistake the fact that this is a real problem, that appendicitis in its influence upon the health of the community is a very significant factor.

Reference has been made already to the discussions, the acrimonious discussions, I might even say, concerning maternal mortality in this city, and yet what are the relative losses as between deaths from puerperal causes and appendicitis? Last year in New York City, there were 665 deaths from all puerperal causes and 1,149 from appendicitis.

Let's compare a few more causes of death. Measles in the same year, 213; whooping cough, 129; scarlet fever, 59; diphtheria, 86; typhoid fever, 70; while appendicitis accounted for 1,150 deaths in this city. More than that, the great bulk of these deaths occurred in the younger and, therefore, the most productive age group, which lends even greater significance to the deaths from this cause. Seventy per cent of the deaths occurred under forty years of age.

Dr. Krech, it seems to me, was very modest in saying that his was not a scientific paper. Perhaps it was not in the sense that a surgeon considers a paper to be scientific, but actually it is a very scientific contribution. It is the first broad-scale study of the appendicitis problem in this city and as such, I think is a distinct scientific contribution, and one to which I hope the widest publicity will be given. I hope the facts which have been ascertained will be disseminated widely among the public and among the profession.

The truth of the matter is that we are making no progress whatever in regard to this appendicitis problem. We are familiar with progress which has been made in reference to many other diseases and conditions, and yet in regard to this very important disease, we are making no progress whatever. We are faced with a constantly increasing death rate.

Dr. Krech was very soft in some of his criticisms, it seems to me. He referred rather casually to the value of vital statistics data. Well, when he discussed more in detail the value of the hospital data, I think he proved that neither one of them is very good. The value of any vital statistics records or hospital records does not go beyond the accuracy with which the original entries are made. Many physicians, I know, place very little value on the data gotten out by health departments, but remember that the lack of value is due to the lack of accuracy of physicians in recording definitely the cause of death. As we look over these data, we would assume that nobody outside of the ward room dies of syphilis. We would assume that nobody except the charity patient ever died of alcoholism, simply because doctors hesitate to put down for their private patients these two and other causes of death.

When we come to study the hospital records in these 14 hospitals, time after time, Dr. Krech shows the data are lacking for 60 or 70 per cent of the cases. In other words,

a large proportion of the records mean nothing. He has been very charitable in not pointing out which of those hospitals are the greatest offenders. I think a very significant service can be rendered to the staffs of those hospitals, a service which I hope they will ask Dr. Krech to render to them, by pointing out how they stand in reference to the other hospitals concerned. I hope some representatives of the surgical staffs of the hospitals are here tonight and that you will not lose this opportunity to find out from Dr. Krech wherein your records are lacking in comparison with these other institutions.

One of the discussors has said that this is a public health problem. Quite true, and yet I am very much gratified that a recommendation is not made primarily for some action by a health department. It seems to me that in this instance there is an opportunity for the hospitals concerned, the surgeons, concerned, under the aegis of such an organization as this to make a thoroughgoing study, using uniform records to ascertain some of the unknown factors in this situation.

We do not know why it is that the male is 50 per cent more susceptible to appendicitis than the female, a very important question it seems to me, to which we should find an answer. We do not know why the number of cases and the number of deaths in September double those in December and January. What are the factors which contribute to this selective sex incidence and the selective seasonal incidence of appendicitis? Broad epidemiological studies are obviously needed on those two facts which may throw some light on prevention.

I think that all of us recognize if appendicitis is recognized early, promptly operated upon, the mortality is about one seventh as shown by these figures, of the average mortality. Here there were 1,149 deaths last year in this city. Certainly that should be reduced to 100 or 200, if the proper effort is brought to bear upon it.

It seems to me that here is another great opportunity for service on the part of this organization to study thoroughly this problem. A splendid start has been made. Much more data are needed and can be assembled, the results of which, I am sure, will mean lives saved, deaths reduced from this cause in this city.

Dr. McCreery (New York City). I have been rather on the side lines, perhaps, in this study of Dr. Krech's. I have gone over with him his books of records from the different hospitals, his master charts, and have discussed with him at considerable length his findings and thoughts on his report. I don't think that the Society quite realizes the amount of time, the amount of careful thought that has been put into this study.

There is one point which Dr. Herrick

brought out which I think needs emphasis and that is the question of the instruction of the undergraduate and perhaps to a somewhat lesser extent of the interne in the subject of the acute abdomen and of the acute appendix. Dr. Krech has shown tonight that the acute appendix is one of the major causes of death in the City of New York in the course of a year, and yet as we look over the courses of study in the Grade A medical schools, we are forced to realize that through the increased demands for time on the part of all departments, the amount of time that can be given to the basic subjects—which perhaps those of us who are in general practice feel are of more importance—is being cut down. In one school the amount of time which has been devoted to the subject of appendicitis has been cut down 80 per cent in the last few years.

I know it is hard to squeeze a few more hours into the curriculum, but I do feel that if in the future it will be possible to give more time to these acute conditions, the end results as shown in mortality and morbidity figures, will be very much improved.

Dr. C. W. Crampton (New York City). Mr. President, I have been very much instructed by the speakers this evening and there have been many points which seemed to me of considerable importance, one of which is the point mentioned by Dr. Hurtwell. But there is an apathy in the medical profession with reference to this point of appendicitis. I think twenty years ago the subject was brought out to a far greater audience and twenty years ago a great deal of the discussion was of an acrimonious nature by medical men against the surgeon and they were answered in kind. I recall, I think many of you will recall, many such sessions.

I should like very much to hear if any of the speakers can add to our knowledge of the etiology of this disease. It is perhaps acknowledged to be an infection. I am very much interested in the bacteriology of this disease, in its immunology. Very little has been written, but some things have definitely been written in the last fifteen years on that subject. I should like to know if there is any evaluation of these points.

I should like very much to know, for I am one of the least of those who is sometimes called on in preventive medicine to give advice, how to avoid disease, how the public may be instructed to avoid such things as appendicitis. I should like very much to know more of the preventive side of this whole matter and if there is not time tonight if this is to be referred by the Academy to its appropriate committee for energetic and vigorous pursuit, I suggest a very strong effort be made to develop a preventive side of this subject, its bacteriology, its immu-

nology, as a very positive element in the handling of the whole thing from the standpoint of organized medicine.

DR. G. W. KOSMAK (New York City): Well, Mr. President and Members, I have been very much interested in what Dr. Krech has said and also in the general tenor of his paper, because he has taken a precaution to avoid some of the pitfalls of the other committee.

I noticed that he was very careful not to stress one factor in his investigation which gave the other committee a great deal of trouble and which created a good deal of disturbance, namely, that of preventability. I trust that when a new committee takes up its study, they will have the courage to investigate this particular phase of the situation. Although that feature created more or less dissension on the part of doctors in our maternal mortality study, I think it was the one thing which has directed as much attention to the need for reform as anything else.

I do not know whether I would have the courage to assert here what Dr. Krech failed to assert, or at least I didn't get it, that in these deaths there must have been a certain number that could have been prevented not by earlier attention, perhaps, but what might be called proper attention. These, I know, are debatable points, but unless we have the courage to attack them and to bring them to the front, we will not get far with our remedies.

That is a thought which I had in mind as Dr. Krech spoke, and I trust that it will not be forgotten by the new committee which is to investigate further this particular subject.

DR. EDWIN G. RAMSDELL (White Plains): Mr. Chairman, before referring to the analysis of my own series of cases of acute appendicitis, I cannot refrain from a word of

appreciation of the tremendous amount of work done by Dr. Krech in studying the enormous material from 14 different New York hospitals.

He has impartially, and with meticulous care, gone over the records of these cases in order to give us these interesting figures.

The object of my presentation is to contrast this study of Dr. Krech's with an analysis of 530 cases of acute appendicitis operated by one man, with a more or less uniform technic, in a community in which conditions can be more easily controlled than in New York City.

These cases were operated at the White Plains Hospital which serves a population group of 50,000 people and a group of doctors to whom the importance of early diagnosis and early operation has been repeatedly emphasized.

In conclusion I would like to refer to the total number of cases of acute appendicitis operated at the White Plains Hospital during the period covered by this study. There have been operated by other members of the Staff 775 cases with 28 deaths, or a mortality of 3.6 per cent. Including my own group of 530 cases the total number is 1305 cases, with 41 deaths, or a mortality of 3.1 per cent.

There are three distinct impressions which have been left with me as a result of this experience.

First, the findings at operation so often show a more extensive pathology than was indicated by the clinical symptoms.

Second, the outstanding factor in the appendicitis problem is early diagnosis and early operation.

Third, all credit should be given to the medical men of the community, the family doctors, who see these cases at the onset and get them to the hospital in time for early operation.

HEALTH NOT IMPROVED BY INSURANCE, NOR IS MORAL INTEGRITY

James M. Chalfont remarks that "cold statistics show that contrary to logical expectation, the health of the working classes, instead of becoming better, tends to grow worse under health insurance. And, as a corollary to that fact, the demand upon society for the care of the poor grows not lighter but heavier." By the way, whence comes the cry for all this improved medical care? Where are the newspaper reports of unattended sick, of sick who cannot get doctors' care because they are poor, of increase in morbidity and mortality rates? In America, days lost by sickness per year still average only 6.2, whereas in Germany in 1923 it was 9.2 and under insurance has risen to 16.5 days.

It has been reported in Germany, according to Chalfont, that Health Insurance has merely

added "parasitism to pamperism" and that social insurance is not only one of the major factors which has brought Germany to the verge of economic ruin, but it is undermining the fundamental honesty and moral integrity of the German people.

"Social insurance is today organized to fill the feed-trough of bureaucratic drones," says Dr. Ernst Liek of Danzig in *Medical Economics* for January, 1935.

Let us be gay! The era and the times change. Medicine will still be individualistic and an incentive when all the bothersome things of this transitional phase are over. In solitude and contemplation great thoughts take birth. Mass work, standardized thinking, and formularized therapy will never in the long run suit Americans.

THE DIAGNOSIS AND TREATMENT OF INTESTINAL AMEBIASIS

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The importance of amebiasis is not generally appreciated. There are few diseases which are equally beclouded by misinformation and misapprehension. In the past it has generally been considered to be a tropical or subtropical infection rarely seen in the temperate zone. Surveys in different areas indicate that the climatic factor is relatively unimportant. The *Endamoeba histolytica* is widely distributed and its incidence in any district depends primarily upon the level of sanitation and upon the hygiene of its inhabitants. From 5 to 10 per cent of the population of the United States are infected, and amebiasis, therefore, constitutes a problem with which every practicing physician should be familiar. The major importance of the recent Chicago outbreak lies in the fact that many infected individuals have been scattered throughout the country and that they in turn may be responsible for the infection of others.

The *Endamoeba histolytica* is a parasite of the human colon. It multiplies within the intestinal tract and penetrates and destroys the tissues of the host. The motile forms or trophozoites are responsible for the pathologic changes in the body. Ultimately, certain of them become less active, develop an enclosing resistant membrane, and are passed in the feces as cysts. The cysts are the infective form of the parasite. They remain viable outside the body for considerable periods of time depending upon the conditions of environment. They withstand freezing, and even chlorine in the concentrations used for purification of water supply does not kill them. When these cysts are ingested by man, the contained amoebae are released within the small intestine and the cycle recommences. Active multiplication begins at once and the amoebae pass downward to take up their habitat in the cecum and colon. The trophozoites are very susceptible to lowered temperature and rapidly lose their motility and morphologic characteristics after evacuation from the body.

They are invariably inimical to the host. Their presence is always associated with tissue damage even though clinical evidence

is lacking.¹ Ulceration is the essential lesion. It is most extensive and most intense in the areas of relative stasis, particularly the cecum, the flexures of the colon, and less often the rectum. The cecum is always affected and with increasing severity the more distal areas are involved. The amoebae penetrate the depths of the intestinal glands to gain access to the submucosa. A small abscess results which ruptures into the lumen of the intestine. Peripheral extension occurs beneath the overlying intact mucosa causing secondary necrosis, sloughing, and ulcer formation. In severe cases this may penetrate the muscular coat and lead to perforation and peritonitis. In other areas the lesions are superficial and barely evident on gross examination. There is lysis and destruction of the superficial layers of the mucosa without typical ulcer formation and without much invasion or destruction of the submucosa.² At times the amoebae gain access to the radicles of the portal system and are carried to the liver where they give rise to the serious complications, amebic hepatitis and amebic abscess.

Conventional terminology has assigned to the infection the name of one of its less common clinical manifestations. This has created the erroneous impression that acute dysentery is the characteristic reaction of the host to the parasite. And it is to a very large extent responsible for the failure of the medical profession to appreciate the importance of the infection.

Apart from the less common phenomena, acute dysentery and amebic diarrhea, intestinal amebiasis does not produce a characteristic clinical picture. It may simulate by direct or by reflex action a great variety of gastro-intestinal conditions, and at times gastro-intestinal symptoms are lacking. In many instances the true diagnosis may not even be suspected until careful stool examination reveals the nature of the infection. Amebic infiltration of the cecum or colon may be mistaken for malignant disease. Amebic typhlitis frequently has led to operation for subacute or chronic appendicitis, a procedure which may be followed

by disastrous results, and reflex pylorospasm may lead to suspicion of gastric or duodenal ulcer.

Table I which Reed³ has prepared illustrates the great variety of presenting symptoms which are encountered. The patient may complain that his stools are constantly soft and unformed and perhaps slightly increased in number, or there may be periods of watery diarrhea without gross blood or mucus. Not infrequently there is constipation alone or alternating with looseness. Abdominal pain is very variable in incidence, in location, and in character. It is frequently referred to the region of the appendix, the cecum, and the ascending colon. It may be severe. During periods of loose stools or active diarrhea the pain may be colicky and midabdominal. Tenderness on palpation in the right lower quadrant is not uncommon. Tenesmus occurs only with involvement of the distal colon.

Even though the lesions are not sufficiently severe and extensive to produce these more characteristic symptoms, they may cause indirect effects which lead the patient to seek medical advice. Flatulence and abdominal distention occur frequently. Unexplained nausea and vomiting, neuroses, and asthenic states often accompany a chronic and unsuspected amebic infection.

DIAGNOSIS.—The diagnosis of intestinal amebiasis depends upon the demonstration of the organisms. In the presence of a classical acute dysentery it should not long be in doubt. There are frequent evacuations of fecal matter which is intimately mixed with small flecks of blood-stained mucus, the so-called "sago-grain stools." When there is involvement of the sigmoid and rectum with severe tenesmus, there may be additional passages of bloody mucus. Less commonly there is watery diarrhea with very little blood and mucus on gross inspection. Proctoscopic examination reveals characteristic changes in the rectal and sigmoid mucous membrane. It is studded with small ulcerations with normal mucosa intervening. Microscopic examination of curettings from these ulcerated areas, and of the flecks of blood-stained mucus in the stools reveals large numbers of the motile trophozoites.

Recognition of cases without acute symptoms is a more difficult procedure. It requires considerable training in protozoology and practical experience to differentiate accurately the pathogenic *Enda-*

TABLE 1.—MAJOR SYMPTOMS IN A GROUP OF FIFTY PATIENTS (Reed)

Diarrhea	28	Neuroses	9
Constipation	24	Fever	6
Abdominal pain	21	Nausea and vomiting...	5
Fatigue	21	Arthritis	4
Dysentery	18	Secondary anemia.....	2
Low weight.....	14	Liver abscess.....	1
Flatulence	9		

moeba histolytica from the nonpathogenic species frequently encountered in the stools of normal persons. James² has said: "Nearly twenty years of work on this subject has convinced me, and, I may add, others better qualified than myself, that the correct diagnosis in fresh material of intestinal amebiasis not associated with dysentery, and the proper identification of the four species of amoebae commonly found in the stools, is a task requiring long and special training, and is not to be entrusted, as it so often is, to the ordinary worker in the laboratory or the inexperienced technician."

It should be possible, however, for the physician to suspect the infection if sufficient stools are examined and certain rules are observed. The character of the stools is important. As a rule, encysted forms are found only in formed feces and the motile amoebae only when the stools are soft or liquid.

In the presence of diarrhea or dysentery the freshly passed and warm stool must be carefully examined for small particles of blood-stained mucus. One of these should be fished at once to a slide and examined before cooling occurs and the amoebae become inactive. The amoebae are not found in the fecal material.

A diagnosis of amebiasis must not be made unless the active forms show a sharp distinction between the food containing endoplasm and the clear glass-like ectoplasm of the pseudopodia; the amoeba must contain definite red blood corpuscles; and it must exhibit progressive motion across the microscopic field.

Demonstration of encysted forms frequently requires the examination of a series of stools passed on successive days. The cysts are not excreted constantly and from three to six specimens must be found negative before it is safe to assume that infection is absent. Since this phase of the life cycle is resistant, precautions against chilling are unnecessary. A thin suspension of the fecal matter in saline should be

TABLE II.—DIAGNOSTIC CHARACTERISTICS OF *ENDAMOEBIA HISTOLYTICA*

	Form	Where found	Morphology
Liquid stools	Trophozoites	Blood-stained mucus	Progressive motion; glass-like pseudopodia; contained red blood cells
Formed stools	Cysts	In the fecal mass	Saline Preparation: Blunt-end chromatoid visible; nuclei not visible Iodine Preparation: 4 nuclei paired at different levels with centrally placed karyosome, chromatoid not visible

made on a slide and covered with a cover glass. A similar preparation should be made using Donaldson's iodine. The cysts of *Endamoeba histolytica* are spherical bodies 7 to 12 μ in diameter. Nuclei are not visible in the saline preparation, but, if the specimen is fresh, a block of less refractile material with blunt, rounded ends may be seen within the cyst. This blunt-ended chromatoid body is characteristic of this species of amoebae. In the iodine preparation the chromatoid body is not seen, but the nuclei are stained and clearly visible. These are usually paired at different optical depths and each contains a centrally placed karyosome. The diagnosis of encysted *Endamoeba histolytica* should not be made unless all of these features are demonstrable.

TREATMENT.—Infected individuals must be treated irrespective of the presence or absence of symptoms. There may be gross ulceration of the intestine without significant clinical phenomena. The equilibrium existing between the parasites and the apparently healthy host is easily disturbed. Acute dysentery may occur with little or no warning and amebic hepatitis and abscess of the liver are seen without antecedent intestinal symptoms. Treatment, therefore, is essential for the protection of the infected individual. It is equally essential to prevent spread of the infection. However, it must have as its objective not only symptomatic cure but the complete eradication of the parasites. The latter is often difficult to accomplish. It requires knowledge of the pathology, familiarity with the mode and site of action of the various amebicidal drugs, and careful evaluation of the problem presented by the individual patient.

Many drugs have been used for the

treatment of amebiasis. No single one is adequate for every case and certain ones are associated with real dangers which are not generally appreciated. Emetine is excreted slowly and may cause serious poisoning when given in too large dosage or over too long a period. It produces myocardial damage which not infrequently has resulted in death from cardiac failure. Occasionally it is the cause of a serious peripheral neuritis. Consequently it must be used with strict adherence to the rules for dosage. The presence of organic heart disease demands even greater caution. Rising pulse rate, falling blood pressure, and widening of the cardiac diameters must be recognized as danger signals.

Emetine appears to act principally upon the amoebae in the tissues and although it will check an acute dysentery promptly, it does not eliminate the infection.⁴ The hydrochloride should be administered intramuscularly rather than intravenously or subcutaneously. The individual dose should never exceed 1 mg. per kilo of body weight per day, and the total dosage should not exceed 10 mg. per kilo of body weight. When given in this dosage the drug cannot be used again within six to eight weeks if the danger of cumulative poisoning is to be avoided.

Stovarsol and treparsol have been much used. Frequently, they have been the cause of serious arsenic poisoning. They are not efficient amebicides when given in amounts that are safe. Recently Reed⁵ and his associates have developed a relatively nontoxic arsenical, carbarsone, which is more efficient. It should not be used, however, when there is associated hepatic or renal disease.

The oxyquinoline derivatives are another group of drugs which have been widely used in the treatment of amebiasis. They include yatren, anayodin, quinoxyl, cliniofon N.N.R., and vioform N.N.R. They contain from 20 to 40 per cent of iodine which is partially absorbed and excreted in the urine. These drugs appear to act primarily upon the amoebae in the lumen of the intestine and are relatively ineffective against those in the tissues. They are efficient amebicides,^{6,7,8} nontoxic in therapeutic amounts, and, with the exception of vioform which is irritating to the rectal mucosa, may be given both by mouth and by rectum.

It should be apparent that therapy can be effective only when the amoebae within

the lumen of the intestine and those within the tissues are simultaneously exposed to lethal concentrations of actively amebicidal drugs. This frequently requires the use of two or more of these drugs in combination, and by different routes. The case with acute dysentery and extensive ulceration, should receive emetine. At the same time one of the other drugs should be given by mouth and by rectum. The average adult dosages of these preparations are: Carbarsone, 0.25 gm., orally twice daily for ten days, and retention enemata of a 2 per cent solution; anayodin, quinoxyl, and chiniofon, 1.0 gm., orally three times daily for eight to ten days and retention enemata of a 2 per cent solution. Vioform can be given only by mouth. The dosage is 0.25 gm., three times daily over a similar period. The patient should be confined to bed until there is clinical and proctoscopic evidence of healing. During the period of ulceration the diet should be soft and free from irritating residue. Bismuth subcarbonate is of value in lessening the diarrhea, and opium may be required to control pain and severe tenesmus.

The asymptomatic cyst passer may be

treated as an ambulatory patient using one of the drugs for oral administration. If this proves ineffective it is the writer's practice to institute the rigorous treatment outlined for the acute case. Emetine should not be used unless the patient is confined to bed and under careful supervision, and he should not indulge in strenuous exertion for a period of three or four weeks after its use.

Summary

1. Repeated negative stool examinations over a period of one to two years after clinically successful treatment are required before one is justified in assuming protozoologic cure.

2. Various modifications of therapy may be necessary to achieve this goal with the individual patient.

3. It is highly important for the physician to realize the wide distribution of amebic disease, its protean clinical phenomena, its hazard to the infected individual and to the community, and the difficulties and dangers of therapy.

16 EAST 90TH STREET

References

1. Dobell, C., and O'Connor, F. W.: *The Intestinal Protozoa of Man*, Wm. Wood & Co., New York, 1921.
2. James, W. M.: Some Observations of Intestinal Amoebiasis Due to Infection with *Endamoeba Histolytica*. *Ann. Int. Med.* 2: 171, 1928.
3. Reed, A. C.: Amebiasis—A Clinical Summary, *California & Western Med.* 40: January, 1934.
4. Craig, C. F.: Amebiasis and Amebic Dysentery, *Am. Jour. Digest. Dis. and Nutrition* 1: 4, 1934.
5. Reed, A. C., Anderson, H. H., David, N. A., and Leake, C. D.: Carbarsone in the Treatment of Amebiasis, *J.A.M.A.* 98: 189, 1932.
6. O'Connor, F. W., and Hulse, C. R.: The Treatment of Amoebiasis with Anayodin, *Nineteenth Annual Rep. United Fruit Co. Med. Dept.*, 64-67, 1930.
7. Mackie, T. T.: Iodoxyquinolin Sulphonic Acid (Anayodin) in the Treatment of Intestinal Amoebiasis, *Twentieth Annual Rep. United Fruit Co. Med. Dept.*, 112-122, 1931.
8. David, N. A., Johnstone, H. G., Reed, A. C., and Leake, C. D.: The Treatment of Amebiasis with Iodochlorhydroxyquinoline (Vioform N.N.R.), *J.A.M.A.* 100: 1658, 1933.

Discussion

COL. ROBERT H. PIERSON, M.C., U.S.A. (Retired), Fayetteville: The subject of amebiasis has forced itself upon the attention of all physicians who have practiced in tropical or semitropical countries. Surgeons of the United States Army and Navy have been brought in contact with this disease since the time of the Civil War.

Records of the Civil War are of little value as diagnoses were uncertain. All enteric diseases were grouped together. There was no clear differentiation between the dysenteries and typhoid fever. The differentiation between amebic and bacillary dysentery was unknown.

During the early occupation of the Philippines amebic dysentery was known as such and was a dreaded scourge. Troops were stationed throughout the provinces in small towns where sanitary conditions were of the worst. Amebic dysentery was common. The cases were severe. About 5 per cent developed liver abscess.

At that time Colonel Thomas Rhodes, Medical Corps, U. S. Army, perfected the operative technique for liver abscess. His monograph on that subject was a classic. Medical treatment was ineffective. Many medicines were used. None of them was of much use. The most effective measures were those for prevention of the disease. When a patient had once become infected he was simply unfortunate. The outcome of his disease was not greatly determined by any treatment then available.

In the Philippine Islands today our troops do not suffer greatly from amebic dysentery. During a tour of two and a half years during which I was in command of a hospital of one hundred and fifty beds on the Island of Corregidor, at the mouth of Manila Bay, there were only two or three admissions for amebic dysentery. The cases were mild and quickly responded to treatment. During the same period there were but few admissions for this cause at the Sternberg

Hospital at Manila. There was but one case of amebic liver abscess.

The change has come about through the use of pure water supplies, chlorination of water, discontinuance of the use of uncooked foods, and effective medicinal treatment of early cases.

Natives of the tropics have considerable racial, natural, or acquired immunity to amebiasis. In the Philippine Islands it was difficult to impress the natives with the necessity for boiling drinking water. They drank unsterilized water and had no ill effects. They could not understand why the white man must drink boiled water. Sir Patrick Manson remarked that on a European coming to the tropics the grossly unsanitary conditions under which the natives lived made an immediate and profound impression. Such conditions would bring death to the foreigner but under them the natives not only lived but thrived. They have a high degree of immunity.

There are many kinds of amebae. They are common enough in stagnant water in both tropical and temperate climates. There are only a few kinds which are harmful to men. In the intestinal tract three or four kinds may be found which are simple saprophytes. The mere fact that amebae of some kinds are present in the stools means little.

Amebae attain luxuriant growth in tropical countries. In temperate climates they are less numerous and less vigorous. While some surveys have brought out the fact that from 5 to 10 per cent of the population in temperate climates have amebae in the intestinal tract, the incidence of amebic dysentery is very low.

The United States Army has troops scattered in the Second Corps Area, throughout New York, New Jersey, and Pennsylvania. They go to the various training camps and are scattered throughout the various Conservation Camps. The report on amebic dysentery is negative.

The Attending Surgeon, New York City, treated but two cases last year. Neither of them was a soldier. One was the daughter of an army officer who had visited Chicago. Her father, who has served in the tropics, knew the disease. He brought her at once to the Attending Surgeon. Her cure was prompt.

The other case was that of a man who had contracted the disease in Chicago in June, 1933. He had been to several physicians without diagnosis of amebiasis being made, though several samples of stools had been sent to laboratories. The reports were negative. At the attending surgeon's office the stools were found to be heavily infected. There were four amebae in the first specimen examined, in the first field seen under the microscope. Cure was uneventful.

Examination of the stools, if the diagnosis of amebiasis is to be determined, must be made of specimens which are not only fresh but warm. It is easiest to have them made when patients are in hospital. At the Attending Surgeon's office in New York examinations are made of fresh stools which are passed at the dispensary.

The Regional Director of the State Board of Health of New York has issued instructions for physicians who submit stools for examination to have the specimens put in thermos bottles and carried immediately to laboratories.

Records of the New York City Board of Health for a period from January 1, 1934, to September

1, 1934, show reported cases of dysentery as follows:

Bacillic dysentery—Cases 155; Deaths 8.

Amebic dysentery—Cases 55; Deaths 5.

Of the amebic dysentery cases:

6 originated in N. Y. City or from sources undetermined.

29 originated in Chicago.

20 originated in other states or countries.

Several were from New Jersey; 4 from Florida, others scattered—Texas, Louisiana, Italy, Germany and China.

New York City has a water supply from excellent sources. The water system is good. Incidence of amebic dysentery is correspondingly low.

It would appear that where the sources of water supply are questionable and where systems of purification are imperfect there is a correspondingly higher rate.

The incidence of a high rate of infection among visitors to localities where they have contracted amebic infection brings up an interesting question of local immunity. It is quite possible that in places where the ameba histolytica is present the local inhabitants have acquired a relative immunity. This would be similar to the immunity enjoyed by natives of the Philippine Islands and China, where natives are relatively immune but visitors are susceptible.

TREATMENT

Amebic ulcers tend to burrow beneath the surface. Treatments by medicines either given by mouth or by enemas touched only the surface. Old treatments with morphine and bismuth only relieved immediate symptoms. The ameba histolytica remained undisturbed.

The first advance in treatment came when ipecac in massive doses was used. This treatment was so severe that it was almost worse than death. The next great advance in medicinal treatment came with the use of emetin. It was possible to use a drug which was a specific against the ameba histolytica. There was something which would kill the parasite without killing the patient. It is as much a specific for amebiasis as quinine is a specific for malaria. With the use of emetin cases were treated earlier and were cured. Amebic dysentery could be controlled.

Objections to emetin are that it has to be given by hypodermic. The injections are rather painful. The drug has some harmful effect upon the heart muscle but most patients suffered no ill effect. The cure was far less dangerous than the disease.

Ten years ago emetin was the main reliance of the physician who treated cases of amebic dysentery. It is still one of the therapeutic mainstays. It is indicated in cases where there is any kidney involvement or where there is suspicion of liver abscess. It may also be required in some cases of long standing which do not respond to arsenicals.

The arsenical most favored by physicians with whom I have been brought in contact is Carbarsone. It was first prepared by Ehrlich. This drug is given by mouth. Two two-and-one-half grain tablets four times daily, for an adult, for ten days. To be effective it is given in nearly twice the recommended dose of one tablet four times daily.

Before treatment the patient should have the urine examined. Some physicians also have the eyes examined. Palpation and percussion will give the liver outlines. If there is suspicion of liver abscess or evidence of nephritis it is contraindicated. In such cases use emetin.

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While amebic dysentery is not now the menace to white residents of the tropics that it was a few years ago it is still a disease to be carefully avoided. It is less prevalent in temperate climates than in tropical or subtropical climates but it is still enough of a menace to make precautions very advisable for persons who are traveling.

The old English custom of drinking nothing which has not been boiled or does not come

in a bottle is worthy of merit. In addition it is well to avoid lettuce and other uncooked vegetables.

Infections with amebae are not the only ones which endanger. In this part of the country bacillary dysentery is three times as common as the amebic variety. There are also dangers from other enteric infections to be considered. Here infection with typhoid and paratyphoid are not uncommon. In the Far East the danger of infection with cholera is the greatest danger of all.

While the incidence of amebic dysentery in New York City is not high (only 55 cases in 8 months in a population of over 7,000,000), the death rate of 5 out of the 55 cases was too high. It may be attributed to delayed diagnosis and ineffective treatment. There was but one case of liver abscess.

We now know that infection of the intestinal tract with ameba is not uncommon. We know that in temperate climates amebic dysentery is not yet a therapeutic menace. We should, however, be on the alert to detect these infections. If they escape detection and do not receive specific medication the prognosis for the patient is none too good.

OHIO-MICHIGAN-INDIANA-ONTARIO-NEW YORK-PENNSYLVANIA SECTIONAL MEETING, AMERICAN COLLEGE OF SURGEONS

The Ohio-Michigan-Indiana-Ontario-New York-Pennsylvania sectional meeting of the American College of Surgeons will be held in Cleveland, Ohio, on Thursday and Friday, April 4 and 5 next. Headquarters will be at the Hotel Statler. An active Committee on Local Arrangements, with Dr. William E. Lower as chairman, and Dr. John Dickenson as secretary, have plans well in hand for an excellent meeting.

Following is a preliminary outline of the entire program:

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TUBERCULOSIS HOSPITAL AND FAMILY PHYSICIAN

GEORGE W. WEBER, M.D.

From the Ulster County Tuberculosis Hospital, Kingston

The problem of intelligent co-operation and the maintenance of friendly relations between members of the medical profession and field workers engaged in the fight against tuberculosis has always been a serious one, and it is evident that a satisfactory solution of this problem would not only undoubtedly benefit both these groups, but also the public at large.

The physician of today justly views with some alarm the perceptible leaning toward state medicine and the ever increasing number of free clinics which inevitably threaten encroachment upon his private grounds. The field worker, on the other hand, feels that he is successfully fulfilling his mission only when he expands his sphere of activity as widely as possible. Occasionally he will overstep into the physician's domain, and even if this is not always deliberate, sooner or later consequently he will encounter indifference, and perhaps antagonism. The results of the mutual distrust thus engendered have been unfortunate. In many instances the clinic staff, perhaps considering themselves the sole possessors of wisdom on tuberculosis, and always eager for impressive statistics, examine, with or without the physician's permission, anyone who walks into the clinic.

In retaliation a physician who suspects tuberculosis will send his patient not to the clinic, but to the general hospital for an x-ray; or, this proving beyond the patient's means, he contents himself with sending a specimen of the sputum to the State Laboratory. Too great dependence upon this method of diagnosis may be one of the reasons why a majority of cases admitted to the hospitals are in a far advanced stage, as it is a well known fact that in many incipient lesions the sputum may be repeatedly negative. However, there is no doubt that the medical profession as a whole does realize the importance of field work, the necessity of extensive x-rays, and the help which the facilities of a well conducted tuberculosis clinic can supply. In the case of the clinics conducted periodically by the Division of Tuberculosis of the State Department of Health throughout New York State, the number of patients sent each time by private physi-

cians gives conclusive proof of how much such service is appreciated. At these clinics the patient is examined and x-rayed, but no information is given to him. Within a few days the report, with the diagnosis and eventual recommendations, is sent to the physician, and the final decision left to him, even if admission to the hospital has been advised.

But now what usually happens when a physician sends his patient to the local hospital clinic? He will receive a report of the examination, it is true, but, if the diagnosis happens to be positive, the patient is urged by the staff to enter the hospital for protracted treatment, and the physician will probably lose all track of him from that moment. The hospital staff proceeds to examine all the contacts, requesting the members of the patient's family to come to the clinic, not only for a first examination but, after that, also for check-ups. Even if the patient recovers and leaves the institution, he and his family are still kept under its supervision. And through all this the physician, who was responsible for the original diagnosis, is left completely out of the picture. This does not seem ethical or even logical. After all, if a physician refers a surgical case to the surgeon for an operation, or any other case to the specialist, he does not lose his patient forever, even if prolonged treatment has been required. Reginald Fitz in an article, "Problems of Pulmonary Tuberculosis in General Practice,"¹ says: "The tuberculosis specialist takes care of the patient during an acute phase of a chronic disease, whereas the family physician should take care of the patient during his entire lifetime."

Tuberculosis should not be monopolized by either group. The issue is too important, and certainly the field is wide enough to engross the activities of both. Only it is necessary that the effects be properly co-ordinated and not wasted in petty controversies. This is obvious to anyone interested in the subject.

Naturally during two years of clinic work in our hospital, we have been faced with countless versions of the problem presented above, and in striving for the co-operation and good will of the general

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ULSTER COUNTY TUBERCULOSIS HOSPITAL

Kingston, N. Y.

January 30, 1935

My DEAR DOCTOR:

The following is the periodical report of the condition of your patient Patsy M., who is at present in our Hospital.



On Admission			
Temp.	Pulse	Weight	Sputum
99.8-100	92-100	122¾	Gaffky 6
At Present			
Temp.	Pulse	Weight	Sputum
98-98.6	80-90	131¾	Gaffky 5

Present General Condition and Physical Examination

The left lung appears to be clear. Right lung: Anteriorly, slight hyper-resonance over the supra and infraclavicular regions. Breath sounds slightly diminished in this area, and normal toward the base. Posteriorly, hyper-resonance in the upper third and at the periphery down to the base. The breath sounds are distant, almost absent. No adventitious sounds. No shifting level at the base and no succussion. Patient coughs and raises much less than on admission. Has had no more hemorrhages. General condition is much improved.

X-Ray Findings

There is a partial pneumothorax of the right side. The upper lobe is more collapsed and atelectatic, while the lower lobes are almost completely expanded. The upper lobe still shows the presence of a cavity which, however, is smaller than on previous examination. There are two adhesions at the level of the first and second ribs which seem to interfere with a complete and satisfactory collapse of the cavity. No fluid is present at the base. The left lung is clear. No deviation of the heart or mediastinum.

Treatment

Artificial pneumothorax and strict bed rest. If the adhesions should prevent further collapse and closure of the cavity, their resection through a closed pneumolysis should be considered in the near future.

Remarks and Recommendations

The patient's wife and children have been examined and found negative. It would be advisable to have his parents examined also in order to rule out the members of the family as the source of infection. The patient's family has been notified of this report and has been referred to you.

.....
Medical Superintendent.

practitioner, we have gradually evolved a simple system of routine which not only considers the physician *at every point, but enlists his valuable aid as well*. Although incomplete and lacking in many respects, the details of this system may possibly afford suggestions to other institutions.

(1) First of all, we never examine a patient without the knowledge and consent of his physician. Request cards for examination of the type used by the State Clinic are supplied to each physician, and every patient must present one. An occasional exception is made when a patient arrives at the hospital without one (the hospital is not easily accessible to persons without automobiles), and in this necessity we get the permission from his family physician by telephone. If the patient has no physician and cannot pay for one, we refer him to the Relief Office which will provide for him. To our knowledge, no patient has ever refused to follow this procedure.

(2) All information regarding his examination is withheld from the patient. He is again referred to his physician, who as a rule receives our report within 24 hours. In the case of a positive diagnosis with hospitalization indicated, we feel that the family physician has a better chance of convincing both patient and family of this necessity.

(3) The amount to be paid for the examination is left to the physician's discretion, as he is in a better position to know the financial status of his "families." Although it is most important in our work to avoid the imposition of fees, yet there are a few who could afford to pay a small sum. Therefore on one corner of the card are printed the figures 0-1-3-5-10, one of which is checked by the physician. It is true only a very small number pay three or five dollars, but at least with this system we prevent abuses on our services and, more important, we avoid displeasure on the part of the local hospitals and physicians who may have x-ray equipment.

(4) A small photograph of the x-ray is attached to the report. (See Chart 1.) The written report alone of an x-ray, no matter how detailed, is never wholly satisfactory to the practitioner, who, as a rule,

glances quickly to "diagnosis." Moreover we feel that if he could visualize the x-ray, his interest in the physical examination would be stimulated and he would derive greater satisfaction from a correct diagnosis. The ideal way would be for us to send him a full size copy of the x-ray, but since this is impractical because of the expense involved, we think that the small copy serves as a very good substitute. We use for the purpose a Kodak adapted for making lantern slides and from these, copies are printed on ordinary sansitized paper. The extra cost of a few cents, and the few minutes required for each copy are well spent, as this small photograph reproduces faithfully the same contrasts as the original x-ray and it is also clear enough to give, together with the written report, a detailed idea of the character and extent of the lesion. Naturally this is used only for cases showing any pathological condition of the chest, whether tuberculous or not.

(5) During hospitalization and also after discharge, the physician receives periodic reports with a copy of the latest x-ray, (Chart 2), giving details of his patient's condition, as well as information regarding the prognosis, the type of treatment advisable, and so on. In this way he keeps in touch with every phase of the disease and is able to confer competently with the relatives, who in the meantime have been notified by us of each report. While the clinic staff is not excluded entirely from direct interviews, still we have found from experience that the family physician, with full knowledge of the case, has often been more successful than we have in obtaining consents for pneumothorax, or other surgical intervention, or even for the examination of all the contacts in a family.

Thus, by demonstrating that our aim is service and not competition, we believe that a closer and more efficient relationship is being established between the medical profession and our hospital. All we ask in return is more interest in the serious problems of tuberculosis and support in the attempt to solve it.

Reference

1. Fitz, R.: Problems of Tuberculosis in General Practice, *Ann. of Int. Med.* 7: 245, 1933

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EDITORIALS

The Medical Attitude Explained

The Report of the Reference Committee of the House of Delegates of the A.M.A. furnishes a concise and unequivocal explanation of the medical profession's opposition to compulsory health insurance. Regardless of economic factors, the primary concern of organized medicine must be betterment of the public health and the advancement of medical science. These aims are incompatible with a system that regiments physicians and sets up a lay bureaucracy in control of practice.

The element of compulsion is a vicious one in any program for budgeting the costs of medical care. It destroys the essential element of professional confidence, whether the plan is administered by Federal, State or local agencies. It induces malingering on the part of unwilling subscribers who insist on some return for their forced contributions.

Although the report of the President's Committee on Economic Security embodies some of the principles enunciated by the A.M.A., it is in many respects unacceptable. The Wagner bill is also guilty of grave departures from the ten points laid down by the profession as the basis of any satisfactory program for the distribution of medical care. Physicians recognize the need for Federal aid in supplying the indigent with basic necessities during an emergency; but they do not believe that adequate medical relief can be provided

except under medical direction. The Wagner bill gives the lay Department of Labor control over the care of crippled children and the advancement of child and maternal health. It fails to specify any medical personnel on the social insurance board, which will handle many essentially medical problems.

The Reference Committee reiterates what the profession has always held: there are no social cure-alls any more than there are panaceas for physical ills. A sound sociological program, no matter what its aim, must be based on local conditions—on the economic, mental, and moral character of a community rather than uniform national legislation.

There are over one hundred and fifty plans on trial in various sections of the country, some giving a record of successful operation unequalled by compulsory health insurance at its best. Surely it were wiser to extend the best of these experiments than to force the country to accept a system which organized medicine considers "fatal to medical progress" and destructive of quality in medical care.

Schools for Scandal

The roots of most quackery lie in the sectarian schools that make fortunes advertising a short cut to the practice of healing. In many cases the ignorant matriculants are honestly unaware of the limitations of

the methods taught them. The proffered degree convinces them of the authenticity of the curriculum and they embark upon what is in fact the illegitimate practice of medicine, sustained by the diploma of their spurious alma mater.

Although the Education Law is explicit in its ban on degrees unauthorized by the Legislature or the Regents, several schools of chiropractic and naturopathy have openly flaunted the statutes for many years. Within the past few months their immunity has been abruptly terminated. A concerted campaign by the State Department of Education, Deputy Attorney General Ullman and his staff and the District Attorneys of New York City has already resulted in the conviction of officials of the Eastern Chiropractic Institute; and the heads of two other institutions—the New York School of Chiropractic and the American School of Naturopathy—are on trial. The notorious Benedict Lust is one of the defendants in the latter action.

Alarmed by this turn of events, the friends of naturopathy are attempting to allay the threat of prosecution by amending the law. There is more than a touch of humor in the Howard-Kirnan bill, which authorizes the establishment of colleges of "natural therapy." The prescribed curriculum includes cibology, hirudology, dietology, clysmology, laxatology, potiology, rotology, and electrolysis, among other subjects. Do we hear envious sighs from the melancholy Mock Turtle, who only had the advantages of Ambition, Distraction, Uglifications, and Derision?

There is little likelihood that the Legislature will add a monstrosity like the Howard-Kirnan Act to the statute books. The current campaign against unauthorized schools indicates that the state has had enough of these incubators of quackery.

Early Detection of Poliomyelitis

It appears as if the dread sequelae of poliomyelitis may soon become the exceptional rather than the usual hazards in the treatment of this malady. Considered primarily as a disease of infancy, it has taxed the resources of our health authorities who have been confronted, in the past decade, with its spread among older chil-

dren as well as among adults. The uncertain manner in which the disease is transmitted from person to person has considerably handicapped preventive medicine. Whether the portal of entrance is through the upper air passages solely or whether the virus gains entrance via the intestinal tract, is still matter for further investigation; both views have supporters capable of furnishing convincing proof.¹

With the advent of serotherapy for poliomyelitis and the excellent results reported from its use, the family physician once more assumes an important place in medicine's attempt to obviate the frightful paralyses which too often ensue following an attack of this affliction. It is conceded that at present, serotherapy affords the greatest promise of success when employed very early in the course of the disease. Consequently the establishment of an accurate diagnosis at the soonest possible moment adds immeasurably to the possibility of securing a complete cure by this method of medical care.

Wieland² stresses the importance of the preparalytic symptomatology of poliomyelitis. He described two forms which the prodromal symptoms may assume. One type is characterized by the appearance of muscular weakness which may either be generalized or confined to certain muscle groups. There may be merely an unsteady gait or twitchings of the muscles in the arms and legs; on the other hand, the weakness may be so pronounced as to cause a temporary collapse. In this type, the patient may also present indefinite rheumatic pains.

The other variety of the prodromal stage in poliomyelitis is more definitely diagnostic since the symptoms point to a neurological involvement. The disease should be suspected when pain is present upon pressure over the great sacrosclatic foramen, the site of emergence for the sciatic nerve, (the sign of Lasègue); when there is pain in the back and along the spinal column, and when nuchal rigidity is evident upon examination.

In the abortive cases of poliomyelitis,

¹ Toomey, J. A.: Poliomyelitis, *Jahrbuch f. Kniderheilk.* 143: 353, 1934.

² Wieland, E.: Prodromal Stage of Poliomyelitis and Its Significance for Early Diagnosis and Therapy, *Jahrbuch f. Kniderheilk.* 143: 321, 1934.

the prodromal stage may be entirely absent and recourse must then be had to the characteristic findings in the cerebrospinal fluid. In any event, the early detection of this lesion depends largely upon the clinical acumen of the physician, and, since serotherapy must be started as soon as possible, the knowledge of the earliest symptoms of poliomyelitis is of the utmost importance.

Xylose

The sugars available for use as fuel for the body are characterized by a special chemical constitution of which the essential factor is a skeleton consisting of six carbon atoms. Similar compounds, but possessing more or less carbon atoms, can be synthesized in the chemical laboratory, or they are found to exist in nature. Artificial production can be carried out only at very great expense, and up to very recently even those already existing in natural combination were available only after tedious and costly extraction processes. Newer developments in sugar chemistry have resulted recently in the separation of a 5 carbon sugar (xylose), which is obtained from wood pulp. This product possesses practically all the characteristics of ordinary sugar, being sweet, readily soluble, and harmless, but the selective action of the body is such that it passes through the liver without the slightest absorption and is excreted quickly through the kidney.

Hence it forms an ideal substance for testing renal function. Fishberg and Friedfeld¹ in a recent article show that if a fixed amount fifty grams in an adult, is given as a lemonade in the presence of normal kidney function, it will appear within three hours in the urine at a concentration of at least two per cent, and may be detected by a simple quantitative Benedict reaction.

Slight alterations of kidney function result in modification of this figure. Since the body cannot use this substance in any way whatsoever, it is an excellent method of determining blood volume, since the original concentration injected intravenously is known, and its concentration in the blood can be determined. Due to its sweet taste and non-participation in assimilatory processes, it would seem as if it would furnish an excellent non-fattening sugar and be harmless to diabetics. The future applications of this compound would seem to be almost limitless.

A Good Example to Follow

Elsewhere in this issue appears a short original article by Dr. George W. Weber, "Tuberculosis Hospital and Family Physician," from the Ulster County Hospital at Kingston. The report merits serious consideration because it exemplifies how public health work in relation to tuberculosis may be carried on with the full integration of the family physician in the procedure.

The hospital utilizes the family physician to the fullest extent. No information is given either to the patient or any lay friend by the hospital. If the patient comes to the hospital of his own accord, the hospital contacts the family physician, or if there is no family doctor in attendance, then the hospital sees to it that the Relief Office provides one. The charges that are made are arranged through the family doctor, and during the patient's stay in the institution progress reports are sent to the family doctor.

Here there is a developed plan which should be reduplicated in every other part of the State. Were it more prevalent the mutual distrust between practicing physicians and hospital authorities would be lessened and eventually would disappear.

¹ Fishberg, Ella H. and Friedfeld, L. *Jour. of Clin. Investigation* 11: 501, 1932.

MEDICAL BROADCASTS

The following talks will be broadcast over WABC under the auspices of the New York Academy of Medicine and the Medical Society of the County of N. Y.

Thursday, March 21 at 11 15 A. M., 15 minutes
Subject: Preventing Communicable Diseases in Children

Speaker: Dr. Murray H. Bass, Associate
Pediatrian, Mt. Sinai Hospital, New York

Thursday, March 28 at 11 15 A. M., 15 minutes

Subject: If You Had An Accident

Speaker: Dr. Robt. H. Kennedy, Surgical
Director, Beekman Street Hospital, New York

Society Activities

Insurance Information Assured

"Over half the misery of this world is caused by the drawing of wrong inferences." The Council and its Executive Committee are ever conscious of the constant rumbling of interrogatory criticism by members concerning the Group Plan of Insurance against alleged malpractice. Occasionally this rumbling becomes articulate in the form of direct questions from members or from County Societies. Judged by the strange and unexpected qualities of most of these questions, they have been framed by those who misunderstand the Group Insurance Plan or who

have been misinformed concerning its operations. Misinformation and misunderstanding can be avoided or corrected by complete demonstration of the plan and full understanding. Well arranged addresses and a quantity of lantern slides are available to any component County society in the State, for any meeting, without cost to that society. If the secretary is addressed a few weeks in advance our insurance representative or some well informed member of the Council will be happy to present the subject and answer all queries. D. S. DOUGHERTY, M.D., *Secretary*

Committee on Legislation

BULLETIN NO. 7, FEBRUARY 22, 1935

The following bills have been introduced since the issuance of our last bulletin:

Senate Int. 957, Howard; Assembly Int. 1339, Kirnan, adds new article to the Education Law, authorizing establishment of colleges of natural therapy. Referred to the Education Committee.

This is not a chiropractic bill; it originated with some physician of the old school residing in Brooklyn. An excellent description of the bill lies in its definition of a "doctor of natural therapy": "A doctor of natural therapy shall be deemed to be a person who has successfully taken a course of study prescribed by the Regents of the University of the State of New York in a college recognized by it in 1. Hydrotherapy (mineral waters); 2. Balneology (mineral bathing); 3. Cibology (preparation of foods for the sick); 4. Dietology (dietetics and metabolism); 5. Hirudology (application of leeches); 6. Hygiene (sanitation, sterilization, antiseptic and aseptic work); 7. Clysmology (lavage of stomach, bladder and colonic irrigation); 8. Laxatology (the relaxation of muscles, tendons, joints); 9. Massage (kneading, exercise, under water exercise); 10. Phlebotomy (application of cupping, plasters, salves); 11. Potiology (drinks, teas in sickness); 12. Rotology (rotation of various parts of the body to relax and release); 13. Electrolysis (removal of hair by electricity); 14. Scalp treatment (to prevent hair falling and baldness); 15. Physiotherapy (the application of diathermy, ultra violet and other radiations under physicians orders)." The Legislative Committee has filed its disapproval of the bill.

Senate Int. 961, Buckley, amends the Judiciary Law by providing jury duty exemption only for lawyers, doctors, clergymen, firemen, policemen, U. S. soldiers, and sailors and ships' officers. Referred to the Judiciary Committee.

Physicians and surgeons having patients requiring daily professional attention are exempted in this bill. The Legislative Committee approves the bill with the recommendation, however, that the limiting phrase be deleted and that all physicians be exempted.

Senate Int. 973, Feld; Assembly Int. 1214, McGrath, amends the Education Law by providing after June 1, 1941, four-year course of study only shall be acceptable for admission to examination as a pharmacist. Referred to the Education Committee.

Senate Int. 1058, Byrne, amends the Civil Practice Act by providing in personal injury actions where court orders a physical examination, party, if a female, may have right to be examined in presence of her own personal physician and such relative or other person as court directs. Referred to the Codes Committee.

Senator Fearon had a similar bill last year. Approved.

Senate Int. 1077, Twomey; Assembly Int. 1473, Alterman, amends the Mental Hygiene law by providing no officer, employee or visitor of state institutions or the Mental Hygiene Commissioner shall be liable for damages in a civil action if he shall have acted in good faith with reasonable care and upon probable cause. Referred to the Health Committee.

Senate Int. 1149, Esquirol; Senate Int. 1179, Esquirol; Assembly Int. 1321—Breitbart, Domestic Relations Law, empowering court to order the making of one or more blood-grouping tests by a physician and permitting result to be received in evidence. Referred to the Judiciary Committee.

Approved. The Assembly bill has been reported out of committee.

Senate Int. 1167, Deyo; Assembly Int. 1486, Bush, adds new article to the Mental Hygiene Law for sterilization of mentally deficient or diseased persons when in opinion of superintendent or director of any state hos-

pital or institution it will be for best interest of innuante and society so to do. Referred to the Health Committee.

Senate Int. 1221, Nunan, Public Health Law, prohibiting the bringing into state or sale of flour to which oxides of nitrogen or nitrus acid or nitrates or chlorine or any other chemical bleaching agent has been added, unless package or container bears label "bleached." Referred to the Health Committee.

Senate Int. 1226, Wojtkowiak, adds new section to the Penal Law making it a misdemeanor to apply any coloring substance to raw meat offered for sale or to sell such meat chemically or otherwise colored. Referred to the Codes Committee.

Assembly Int. 1295, Doyle, creates temporary state of increasing use in childbirth and referred to the "e."

Disapproved on the ground that the Department of Health and the State Society have been collecting data on this subject for two years or more and we believe that a commission of this kind could add nothing to what they have done.

Assembly Int. 1306, Ehrlich, amends the Public Welfare Law by providing person in need of medical care other than hospital treatment shall be attended by his family physician or one of his own choice practicing in vicinity, who shall be employed by public welfare official; otherwise such official shall select the physician, charge to be \$1.00 for each office call and \$2.00 for each house call, and for each obstetrical case in the home, \$25.00. Referred to the Relief and Welfare Committee.

The Legislative Committee approves of the first part of this amendment which provides that every welfare patient shall have the privilege of selecting his family physician, but disapproves of the latter part in which is stated the amount to be paid for certain services.

Assembly Int. 1358, J. E. Stephens, adds new section to the Insurance Law providing no life insurance policy shall be issued unless it provides that after death of insured sum not exceeding 10% of face value and in no event more than \$500 shall be paid pro rata to any claimants for medical aid, nursing and attention and funeral expenses. Referred to the Insurance Committee. Approved.

The Legislative Committee has filed with the proper legislative bodies its approval or disapproval of the following bills in addition to those mentioned above:

APPROVED

Senate Int. 19, Print 774—Medical Abuses

Senate Int. 20, Print 943—Occupational Diseases

Senate Int. 545—Sale of poisonous drugs

Senate Int. 546—Misbranding certain poisons

Senate Int. 547—Manufacture and sale of proprietary medicines

Senate Int. 548—Manufacture and sale of drugs

Senate Int. 575—Relative to milk and milk products

Senate Int. 592—Public welfare districts, medical care

Senate Int. 693—Mental institutions, purchase of supplies

Senate Int. 754—Payment of medical expenses by executor

Senate Int. 869—Decedent Estate Law, medical expenses incident to injury causing death

Senate Int. 898—Medical treatment of pupils with defective sight or hearing

Assembly Int. 764—Labeling cosmetics

Assembly Int. 765—Broadcasting surgical or medical advice

Assembly Int. 1106—Misbranding drugs

OPPOSED

Senate Int. 571—Special nursing care for blind

Senate Int. 572—Amount to be spent on needy blind person

Senate Int. 577—"Home relief" to include eyeglasses, etc.

Senate Int. 589—Practice of electrolysis

Senate Int. 616—Relative to jury duty

Senate Int. 707—Hospitalization of members of city fire depts.

Senate Int. 794—Indigent children to be furnished with eyeglasses, etc.

Senate Int. 802—For licensing school psychiatrists, etc.

Assembly Int. 699—State Insurance Fund, payment of expenses

Assembly Int. 793—"Funeral expenses" to include cost of headstone

Assembly Int. 1061—State to be responsible for public care of person having no settlement in any public welfare district

Assembly Int. 1152—Pasteurization and bottling of milk

ACTION ON BILLS

Senate Int. 20, Print 943—Occupational diseases, passed the Senate

Senate Int. 588—For licensing school psychiatrists, etc., third reading

Senate Int. 807—Pharmacy, revoking licenses, third reading

Senate Int. 619—Motor fuel tax, to Governor

Senate Int. 620—Motor fuel, additional tax, to Governor

Senate Int. 706—Extending TERA, to Governor

Assembly Int. 123—Blood-grouping tests, reported

Assembly Int. 166—Blood-grouping tests, reported

Assembly Int. 194—Protection of water supplies, reported

Assembly Int. 196—Infectious diseases, reports, reported
 Assembly Int. 199—Employ dentists and health nurses, reported
 Assembly Int. 461—Clinical laboratory bill (including x-ray labys.), reported
 Assembly Int. 498—Grants and gifts to hospitals, to Governor
 Assembly Int. 763—Powers of local health boards, reported
 Assembly Int. 978—Mental institutions, purchase of supplies, reported
 Assembly Int. 1321—Blood-grouping tests, reported

HEARINGS

Feb. 26—As. Int. 578	{ Workmen's compensation, insolvent carriers; hearing before Assembly Committee on Insurance.
As. Int. 202	{ Civil Service Law, applicants, examinations; hearing before Assembly Committee on Judiciary.
Feb. 27—Sen. Int. 616 Sen. Int. 961	{ Exemptions, jury duty; hearing before Senate Committee on Judiciary.
As. Int. 150	{ Workmen's Compensation Law, physical examination of employees; hearing before Assembly Committee on Labor and Industries.
As. Int. 210	{ (Same as As. Int. 150.)
As. Int. 644	{ Occupational diseases, silicosis, etc.; hearing before Assembly Committee on Labor and Industries.
As. Int. 740	{ Workmen's Compensation Law, appearances of attorneys; hearing before Assembly Committee on Labor and Industries.

SPECIAL BULLETIN, FEBRUARY 28, 1935

Medical Abuses Bill Passed Out By Committee. The Medical Abuses Bill, Senate Int. 19, Print 774, has been passed out by the Senate Committee and is now on third reading. *We urge you to communicate with your Senator urging his support of the bill.* In mentioning it call it Senate Print 774,

N. A. O'Brien, Medical Abuses. Either wire, telephone, or write a letter. The bill probably will be voted upon Monday night.

The following resolution was introduced in the Senate yesterday. It asks for the appointment of a commission to study the administration of the Workmen's Compensation Law. *Read it carefully;* it is so far-reaching, that every physician ought to be familiar with what it contemplates:

RESOLUTION IN SENATE

By Mr. McNaboe: WHEREAS, by Chapter 41 of the laws of 1914, the Legislature created a fund to be known as "the State Insurance Fund" for the purpose of insuring employers against liability under the Workmen's Compensation Law; and

WHEREAS, Section 95 of the Workmen's Compensation Law provides that premiums in the State Fund shall be fixed at the lowest possible rates consistent with the maintenance of a solvent fund and of reasonable reserves and surplus; and

WHEREAS, Three bills are now before the Legislature for its consideration affecting the Workmen's Compensation Law, as now in force and effect, the first one, being Senate bill introductory number 18, giving to the State Insurance fund a monopoly in such compensation insurance; the second, being Senate bill introductory number 19, giving control of the practice of industrial medicine and surgery to the State and County Medical Societies; and the third, being Senate bill introductory number 20, enlarging scope of the coverage of compensable injuries; and

WHEREAS, It is charged, in respect of the State Insurance Fund, that the administration thereof is lax, corrupt, and inefficient; that its cases are improperly and inadequately investigated and prepared thus necessitating a greater number of hearings than should be required and thereby increasing the cost of administration and unduly delaying relief and compensation to the injured workman and causing the workman to attend unnecessary hearings; that its cases are unnecessarily fought strenuously and that but few cases are paid without controversy; that payment of its just medical and other bills is unjustifiably delayed from one to three years; that its doctors are employed largely through political favoritism and influence rather than because of their professional ability and standing; that doctors employed by such fund and others rendering service and supplies to the fund are compelled to split their fees with State officials; that doctors of mediocre or little ability are, as a result, given the medical work of such fund and that few men of outstanding ability and standing are employed; that hospitals are largely designated by such fund because of political influence and favoritism and not because of professional standing and merit; that the fund is inhumanely administered and payments to injured workmen unduly and improperly withheld and delayed to the great detriment of such workmen; that unfair discrimination in the law now exists in favor of the fund and against the private carriers in that the fund is permitted to rate up risks and the private carriers are not; that the statutory mandate to maintain a solvent fund with reasonable reserves and supplies is not being observed; that the fund is in fact insolvent; that the Industrial Commissioner has

unofficially conceded that the administration of the fund is far from what it should be; and

WHEREAS, It is charged that the State and County Medical Societies have failed to promptly and adequately discipline the members of the medical profession under the powers vested in them by the Education Law and weed out incompetent, unethical, and dishonest members of the medical profession; that a former Medical Director, Workmen's Compensation Division, Civil Works Administration, in a recent public article charged that the County medical societies in supplying him in his official capacity with approved lists of doctors for such work named "a large number of men not able and not ethical," a number sufficiently large to make him question the value of the County medical societies' estimate of their members and non-members as to capability and honesty; that the standards and qualifications required in this State as a condition to obtaining a license to practice medicine are not sufficiently high to prevent incompetent and unethical men from being admitted to such practice; that fee-splitting and its consequent and concomitant evils of unnecessary operations, treatments, the purchase of unnecessary surgical appliances, has become a common practice in the medical profession to the grave detriment and danger of the health and life of our people; and

WHEREAS, It is charged that the County medical societies are not truly representative of the medical profession but are, in the main, in the control of a few selfish, self-seeking members of the medical profession who wrongfully abuse such positions of honor and trust to and in their own interest and against the best interests of the medical profession and the public; and

WHEREAS, One of the primary objects of the State is to protect and safeguard the life and health of its people, and since the conditions recited hereinabove affect the health and welfare of the public as a whole and in particular the health and welfare of the injured workmen, the Legislature should be fully and adequately advised in the premises and in the adequacy of the powers of the Superintendent of Insurance under existing laws to efficiently and properly regulate and supervise private carriers of compensation insurance in order that effective and proper remedial legislation may be intelligently framed and enacted into law; now, therefore, be it

Resolved (if the Assembly concur), That a joint legislative Committee be and hereby is constituted to consist of four members of the Senate to be appointed by the Temporary President of the Senate and three members of the Assembly to be appointed by the Speaker of the Assembly with full power and authority to investigate, inquire into, and make a thorough and careful examination and investigation in respect of the operation and administration and costs of the State Insurance Fund in all respects and in every branch and department thereof including, but without limiting the foregoing, its financial condition, its solvency, and whether or not reasonable reserves and surplus are maintained by such fund as required by law, and including, but without limiting the foregoing, the investigation, preparation, handling, and payment of claims made against such fund and the selection, fitness, and conduct of its hospitals, its outside personnel and medical staff, and its purchases of supplies and surgical appliances and apparatus; whether or

not fees are given to or split with State officials as a condition to or as an inducement of employment or purchase by such fund; the practices of the State and County Medical Societies in general and in every respect and in particular in disciplining or failure to discipline, punish, and weed out incompetent, dishonest, and unethical members of the medical profession; of the adequacy and effectiveness of the present standards and qualifications required as a condition to practice medicine; of the practice of fee splitting among doctors, of operations without proper justification and of requiring the purchase of unnecessary surgical appliances; of the adequacy and effectiveness of the powers of the Superintendent of Insurance under existing laws to properly supervise and regulate the private carriers of compensation insurance, and into every matter and thing whatsoever connected therewith or relating thereto, or to any part of the foregoing directly or indirectly, including the past or present unlawful or improper influence, control and/or domination by any past or present public official or any past or present employee of this State or of any political subdivision thereof over in connection with the State Insurance Fund and its various operations and activities.

The investigation of such committee may include every matter and thing not specifically mentioned in this resolution deemed by the committee competent, relevant, and material in the ascertainment of the true situation respecting the matters referred to herein or directly or remotely connected therewith, as though specific provision and authority therefor had been expressly granted herein, and it may include a full and complete inquiry into every private carrier of compensation insurance.

That such committee be and is hereby authorized to sit in public or in private, in such place or places in the State of New York as it may determine to conduct the investigation herein contemplated and/or authorized or intended so to be during the present session, or, if deemed necessary by the committee, after the adjournment thereof with the same full power and authority such committee would or could have were the Legislature in session; to choose from among its members a chairman and a vice-chairman; to employ a secretary, counsel, accountants, and such other assistants as it may deem necessary; to subpoena witnesses, take testimony and compel the production of books, papers, documents, and other evidence, either public or private, deemed by the committee to appertain to or be connected with or bearing upon this investigation, either directly or indirectly; to have access to an examination by its members, counsel or employees, of all records, books, papers, and documents respecting the matters referred to herein or directly or remotely connected therewith, and otherwise to have all the power and authority of a committee of the Legislature.

The committee may, at any time and from time to time, by resolution of a majority of its members, be subdivided into sub-committees of such number as the committee may determine. Such sub-committees may sit, in public or in private, as they may determine at the same or different times and places in the State of New York. Such sub-committee shall have and possess all the powers and authority hereby conferred upon the committee as such, or to which it may be in any manner entitled.

The committee shall have full power and authority and it shall be its duty to prosecute its inquiry with all due speed in any and every direction and by any and every direction and by any and every means in its judgment to obtain full, true, accurate, and correct information in regard to and to speedily report upon matters contemplated by this resolution; and be it further

Resolved, That whenever in its judgment the public interest demands, the committee or sub-committee may determine that a person shall not be excused from attending and testifying before said committee or before any sub-committee thereof or from producing books, papers, and documents before the committee, or before such sub-committee in obedience to its subpoena on the ground that the testimony, or evidence, documentary or otherwise, required of him may tend to incriminate him or to subject him to a penalty or forfeiture; but no person so attending and testifying or producing such books, papers, or documents, who has duly claimed excuse or privilege, which would be sufficient except for this provision of this resolution and which said excuse or privilege has been expressly desired by the committee, shall be subjected to prosecution or to any penalty or forfeiture for or on account of the transaction, matter or thing concerning which he may as aforesaid testify or produce evidence, documentary or otherwise, before such committee or sub-committee in obedience to its subpoena; and be it further

Resolved, That the said committee shall report to the Legislature with all convenient speed, but not later than the first day of February, 1936, the results of its investigations, with legislative proposals which it recommends, and that such committee may also report from time to time such resolutions of its investigations as it may deem necessary for the action or advice of the Legislature; and be it further

Resolved, That the sum of \$100,000 or so much thereof as may be necessary be and hereby is appropriated from the contingent fund of the Legislature for the necessary expenses of such committee, to be paid out of the State Treasury on vouchers approved and audited according to law.

BULLETIN NO. 8, MARCH 1, 1935

The following bills have been introduced since the issuance of the last regular bulletin:

Senate Int. 1266, Byrne, adds new section to the Lien Law by providing for liens of hospitals, physicians, and nurses for care of persons injured as a result of negligence of other person or corporation. Referred to the Judiciary Committee.

Senate Int. 208, Byrne, the first hospital lien bill, was seriously attacked by the Bar Association on the ground that its enforcement provisions are entirely too weak. The bill was referred to the drafting room with the comment and this bill, 1266, is the outcome. Approved.

Senate Int. 1314, Esquirol; Assembly Int. 1616, Doyle, amends the Workmen's Compensation Law and the Education Law relative to care and treatment of injured workmen and for special licensing of physicians

to practice industrial medicine and surgery and for other purposes. Referred to the Labor Committee.

This bill was prepared by a representative of an insurance company. Its provisions in certain particulars are very different from those in Bill No. 19. It provides for special licensing by the Department of Education of those who would engage in compensation work and for the revoking of workmen's compensation license on charges after hearing. The bill also provides that no claim for medical or surgical treatment shall be valid unless within forty-eight hours following the first treatment the physician furnishes the employee, the employer, and the Industrial Commissioner a preliminary notice of the injury and treatment, and files a more complete report within twenty days; and the fees are to be subject to regulation by the board. It also provides for the transfer of patients: first, in the interests of the injured; second, if the physician does not possess a special license; and, third, "if he has not been licensed by the Education Department to treat the particular injury or condition existing."

Laboratories and bureaus engaged in x-ray diagnosis or therapy must be in charge of physicians specially licensed by the Education Department to handle industrial medicine or surgery. A physician wishing to engage in industrial medicine must "produce evidence of his training, qualifications, and equipment, and shall agree to limit his professional activities in connection with workmen's compensation cases to such medical care and service as his experience and training qualify him to render. He shall further agree to refrain from subsequently treating for remuneration, as a private patient, any person seeking medical treatment in connection with, or as a result of, any injury compensable under the workmen's compensation law, if his special license as provided in section twelve hundred fifty-nine-a of this chapter, has expired or has been cancelled, or if the person seeking such treatment was transferred from his care."

"The special license to practice industrial medicine or surgery, as provided in section twelve hundred fifty-nine-a of this chapter, may be revoked, suspended, or annulled, or the practitioner reprimanded or disciplined in accordance with the provisions and procedure of this chapter upon decision after due hearing of any of the following causes, in addition to those named in subdivision two of this section:

"(a) That the physician has been guilty of professional or other misconduct or incompetency in respect to medical services rendered in connection with the practice of industrial medicine or surgery, or

"(b) That the physician has exceeded the

limits of his professional competence in rendering medical care, as specified in the special license granted to him, or has made materially false statements concerning his qualifications in his application for such special license, or

"(c) That the physician has failed to submit full and truthful medical reports required to be made by him under the workmen's compensation law, to the employee, the employer, the insurance carrier or the industrial commissioner, or

"(d) That the physician has offered to or has participated in the division, transference, assignment, rebating, splitting, or refunding of a fee for medical care other than with a like specially licensed physician, in any case involving industrial medicine or surgery, or

"(e) That the physician has solicited, or has employed another to solicit for himself or for another the professional treatment, examination or care of an injured employee in connection with any claim under the workmen's compensation law.

"Immediately upon the expiration, revocation, suspension, or annulment of the special license issued to a physician to practice industrial medicine or surgery, the department shall publish the fact and remove the name of such physician from the list as provided for in section twelve hundred and fifty-nine a of this chapter"

Senate Int 1365, Thompson, Assembly Int 1688, Hall, amends the General Municipal Law, authorizing governing board of any county, town city or village establishing a public general hospital to acquire lands or rights or construct additional buildings for improvement or maintenance of such hospital. Referred to the Cities Committee

This bill is intended to meet certain specific conditions connected with a hospital in Senator Thompson's district

Senate Int 1374, Crawford, appropriates \$27,000 to increase supervisory service in State Education Department to develop more satisfactory preventive and corrective physical education and recreation programs for children and adults. Referred to the Finance Committee.

This bill emanates from the bureau of physical education in the Department of Education. It provides an appropriation for the institution in the public schools of additional physical corrective programs. The bill was before the Legislature last year

Senate Int 1413, Schwartzwald, Assembly Int 1776 Lo Re amends the Education Law making compulsory transportation and education of physically handicapped children, such children to mean children certified by State or local health boards or medical board of a board of education, as blind cardiopathic, crippled deaf, epileptic, tubercular, or otherwise so afflicted as to be in need of transportation and instruction. Referred to the Education Committee

We do not know the source of this bill, but

presume that it has come from some communities where transportation facilities for this type of children are not provided. The larger cities all have such provision, but they are lacking in many of the smaller communities of the State, yet the Education Law demands that provision shall be made for giving these children an education

Senate Int 1414, Schwartzwald, Assembly Int 1861, Lo Re, amends the Education Law relative to the practice of podiatry. Referred to the Education Committee

This bill provides for a separate examining board in the Department of Education

Senate Int 1415, Schwartzwald, Assembly Int 1862, Lo Re, adds new section to the Education Law, changing name of the Podiatric Society of the State of New York to the Podiatry Society of the State of New York. Referred to the Education Committee

Senate Int 1465, Coughlin, amends the Agriculture and Markets Law by providing when commissioner decides that carcass of cattle or part thereof, which reacted to tuberculin test, may be used for human consumption, he shall issue an order, all such cattle, however, to be slaughtered in abattoir under supervision of U S animal industry bureau. Referred to the Agriculture Committee

Assembly Int 1633, FitzGerald, amends the Public Service Law by providing nothing in law shall be taken to prohibit any water-works corporations from furnishing water to certain religious charitable, and benevolent corporations and societies. Referred to the Public Service Committee.

The objective from our point of view is to free hospitals from prying water tax

Assembly Int 1635, FitzGerald adds new section to the Conservation Law prohibiting after December 1 1936 the running into waters of State of sludge, acid, or refuse from oil works sugar houses or other factories, sewage or other substance injurious to human health or shellfish culture or fish and which may affect their flavor, odor, or sanitary conditions. Referred to the Conservation Committee

Assembly Int 1649, Burke, General Municipal Law, for formation of pest abatement districts on petition to Supreme Court of 100 or more voters cost to be assessed on properties benefitted for appointment of commissioners for each district on recommendation of Education Commissioner, who shall designate technicians from appropriate State departments to determine whether project is sound or desirable. Referred to the Cities Committee

Mr Burke comes from Queens County where there still are some swamps which breed mosquitoes. They have found it impossible to secure co operation from Greater New York in having the places eradicated. Suffolk and Nassau Counties both have active mosquito extermination commissions with appropriations

Assembly Int 1799, Heck, Workmen's

Compensation Law, providing workmen's compensation allowances in work relief disability cases. Referred to the Relief and Welfare Committee.

Last year the law provided that a special fund be created by the Temporary Emergency Relief Administration to guarantee persons injured or disabled while so employed, protection similar to that provided employees by the Workmen's Compensation Law. Mr. Heck's object is to transfer them to the one fund.

Assembly Int. 1863, McDermott, amends the Penal Law by providing experiments shall not be made upon a living dog. Referred to Codes Committee.

Our perennial dog bill.

ACTION ON BILLS

Senate Int. 19—Workmen's compensation, medical abuses, third reading

Senate Int. 154—Infectious diseases, reports, third reading

Senate Int. 271—Protection of water supplies, third reading

Senate Int. 593—Withdrawal from county health district; qualifications of public health nurses, reported

Senate Int. 693—Mental institutions, purchase of supplies, reported

Senate Int. 794—Public Welfare Law, indigent children, reported

Senate Int. 807—Practice of pharmacy, revocation of license, passed Senate

Senate Int. 869—Decedent Estate Law, medical expenses incident to injury causing death, passed Senate

Senate Int. 957—Colleges of natural therapy, reported

Senate Int. 973—Qualifications of pharmacists, reported

Senate Int. 974—Misbranding drugs, reported
Assembly Int. 20—Workmen's compensation, occupational diseases, third reading

Assembly Int. 123—Blood grouping tests, third reading

Assembly Int. 166—Blood grouping tests, third reading

Assembly Int. 194—Health Law, water supplies, third reading

Assembly Int. 196—Infectious diseases, reports, third reading

Assembly Int. 199—Employ dentists and health nurses, third reading

Assembly Int. 202—Applicants for civil service examinations, third reading

Assembly Int. 445—Sale of lye and other caustic substances, third reading

Assembly Int. 461—Clinical laboratories (including x-ray labys.), third reading

Assembly Int. 763—Powers and duties of local health boards, passed Assembly

Assembly Int. 813—State aid to municipalities, passed Assembly

Assembly Int. 978—Mental institutions, purchase of supplies, passed Assembly

Assembly Int. 1106—Misbranding drugs, reported

Assembly Int. 1321—Blood grouping tests, third reading

HARRY ARANOW

B. B. BERKOWITZ

B. WALLACE HAMILTON

JAMES F. ROONEY

LEO F. SIMPSON

Committee on Legislation

PRIVATE AMBULANCE RIDERS

A 500-pound woman who fell out of the bed and needed help to get back; a rain-bound inebriate who couldn't find a taxicab; a Park Avenue whose Pekingese was in critical condition with distemper, and innumerable celebrities such as William H. Woodin, Marie Dressler, Anthony J. Drexel, and Colonel H. H. Rogers were among those who contributed in 1934 to an 8 per cent increase in the use of private ambulances throughout the New York metropolitan area.

Of last year's 21,000 calls, a larger percentage than ever before were to return from hospital to home patients just starting on the road to recovery. These moves varied in length from a trip across a West Side street to a 380-mile journey from Manhattan to Boothbay Harbor, Maine.

Private ambulances in operation in the city during the year traveled an approximate total of 600,000 miles. The Ghetto on the lower East Side competed with the fashionable upper East Side as the district from which most calls came.

January, February, and March led in the number of calls, probably because pneumonia is the disease from which the largest percentage of the patients were suffering. In July and August the calls were least. The evening dinner hour continued as the time of day when the demand for private ambulances was greatest.

The crippling effects of disease and accident are being reduced steadily in upstate New York through the work of the Division of Orthopedics, State Department of Health, allied agencies, and the various convalescent homes and hospitals caring for physically handicapped children.

A case in point is that of a young man, age twenty, who was discharged a year ago from a local hospital with the prognosis "wheel chair for the rest of life." Today he is playing basketball. The New York State Reconstruction Home at West Haverstraw is credited in part with his improvement.

Current Comment

Vernon A. Chapman, writing in the February issue of the *Medical Record*, says "the multiple economic troubles which now beset the members of the medical profession have been brought down upon their heads by the generosity, heedlessness, superiority complex, greediness and medical politics of the medical profession itself, and by the selfishness of its individual members. Employees of city, County, State or United States receiving salary for their work should employ and pay physicians in private practice for medical and surgical services they receive."

Last minute movements in reform are often instituted in efforts to escape retribution following reprehensible conduct."

Seymour Fiske, secretary of the Physicians Equity Association of America, Inc. says "In this fight to improve the economic condition of the doctors, the co-operation of all physicians is necessary."

The question of sterilization among humans who are classified as the "unfit" is receiving serious attention in many places. In the Philippine Islands, Dr. Lee S. Huizenga, speaking of its use among the lepers states "Sterilization of leprosy couples meets with many practical difficulties, at least for the present, and the supposed good to be derived is of a very questionable nature."

March 30 marks the eight hundredth anniversary of the birth of Moses Maimonides philosopher, teacher, writer, jurist, scientist Rabbi, and court physician to the Sicilian leader, Saladin, the Great. "Teach thy tongue to say, 'I do not know,'" said this great teacher.

Dr. E. H. Crane of Inglewood, California, relates an example of Compulsory Health Insurance practice in England.

After returning from a trip, the English doctor found thirty six patients waiting for him. He disposed of them in little over an hour as follows. With a handful of prescriptions he called out, "All who have a cough, stand up!" A prescription was given to everyone who stood up. The others formed a line and marched past his desk. "What's the matter with you?" he asked each in turn. And, as each replied, he received a stock prescription from a pigeon-hole in the doctor's desk. (Reported in the February issue of *Medical Economics*) (Oh shades of the Commission on the Costs of Medical Care! What crimes are committed in thy name!—Ed.)

English Health Insurance like that imposed upon Germany was a political action, and was not prompted by any humanitarian ideology.

To spike the guns of the labor party and add to his sources for voting power, Lloyd George imposed it upon England.

There is widespread sentiment in Great Britain toward complete state medicine and away from the present system of health insurance which embraces only 39 per cent of the population—(*Medical Economics* February, 1935, page 27)

There was a time not so far distant when medical economics and organized medicine did not travel exactly parallel paths. The ringing words of its editor H. Sheridan Brackett, are all the more noteworthy "So vast and all encompassing a project as national health insurance should be written into the laws of the country only after exhaustive criticism of its every detail. Appraisal of the issue should be based not on theory but on practical consideration. Disregard of this principle will lead the medical profession and the country at large into a first-class disaster."

"It is sheer folly to assume that subsidized medicine can be adapted as an 'experiment'."

Once committed to it, withdrawal will be impossible."

People have a natural tendency to belittle current events. Not until years—often decades—after a significant change has taken place, do they awaken to its full purport. Let the profession realize that at this very moment medical history is in the making. If the trend of coming events is to be altered, it must be altered now.

Small effort is required to change the course of a stream near its source. Superhuman efforts alone can divert the sweep of a river at flood.

A complete revision of the health program of the public schools of the whole state is foreseen, as the result of plans now under way. In the first place, under the direction of Dr. Franklin Smiley who has been inducted as Director of Health and Physical Education, the Board of Regents will inaugurate an effort to improve the school children's health. In the second place, Dr. H. F. Mace, A. Bauer, Miss Mary G. McCormick, and Miss Marie E. Swanson are holding a series of conferences with school principals and superintendents to cover a gap found among high school graduates in health education,

and adequate preparation for the latter problems of life. The school physicians of the State are also to receive a series of instructive lectures from Dr. W. P. Brown of the Medical Service Bureau.

"Our 'Biggest Health Program' facing the Department of Health is the medical and educational drive to eliminate venereal disease," said Health Commissioner John L. Rice of New York City. The program contains two main elements. First, every infected person should take treatment immediately; and second, facilities for the diagnosis and treatment of syphilis and gonorrhea must be available.

Dr. John A. Hartwell, Director of the New York Academy of Medicine spoke before the New School of Social Research on February 25, and chided the organized profession on its conservatism and its stand. He said the profession has been controlled "by fear and obstinacy." While Dr. Hartwell is Director of the New York Academy of Medicine, and as such, it is difficult to keep his utterances individual and not have them accepted as representative of the New York Academy of Medicine, yet the organized profession must bear in mind that Dr. Hartwell speaks for himself only. In justice to the Academy, let it be known that that educational institution

has taken no official position on the matters on which Dr. Hartwell talked. Fear and obstinacy indeed! It would be the easier way for the profession. to accept what is offered.

Organized medicine is not yet prepared to accept a ready made pattern of medical practice imported from abroad. It desires to safeguard quality of medical service, save patient-doctor relationship, reduce lay supervision and political control to a minimum, and at least give the public as good a service as the indigent now receive. Incidentally, it desires that these who enter this kind of medical practice shall have a livelihood from it, because private practice cannot be maintained along with this type of medical work.

Catharine Stoddard of Grosse Pointe Park, Michigan, asks a very pertinent question in *Medical Economics* (February issue): "So far, none of these critics [of the profession] has explained how the ethical tone of the profession will be improved, or the public better served by delivering the medical system into the hands of politicians. No one has yet offered any convincing evidence that government medicine burdened with huge administrative corps and affording innumerable opportunities for graft would be any cheaper for the average taxpaying citizen than private practice."

New Health Strategy in Northern Counties

Dr. Burke Diefendorf and a corps of assistants have occupied a new suite of offices in Ticonderoga, to have charge of state public health work in Warren, Washington, Essex, Clinton and Franklin Counties and also the towns of Long Lake and Indian Lake in Hamilton County.

Dr. Diefendorf will be assigned an assistant district state health officer, an assistant district state supervising nurse, a sanitary engineer, a milk sanitarian, and two additional nurses for Essex County and three additional nurses in Clinton County.

The major purpose of the nursing program is to acquaint the people with public health problems, especially those dealing with prenatal work, communicable diseases, control of tuberculosis, and in endeavoring to contact patients while in the early stages so that control may be had without necessitating hospitalization, also education programs in social health hygiene.

The clinic will be arranged as a demonstration, and not as a service project, to get in

closer contact with the average practitioner; this will tend to educate the public to the necessity of consulting their physician.

It is expected that tuberculosis clinics will be held in the several counties instead of conveying the patients several miles to one so-called centrally located clinic and the operation of these clinics will be from Ray Brook instead of Albany as heretofore.

The primary object of the State is to decentralize and bring the field workers into closer contact with the field operations. These nurses were sent to this northern section because it was felt that there was a greater need for them in Essex and Clinton Counties at present than in some other parts of the State.

This plan is to supplement the county health work with no added expense to the localities.

The additional nurses are part of the nationwide United States Public Health service program. This service continues for six months.

In order to promote the immunization of children against diphtheria in very young children, the New York City Department of Health will urge parents to have this treat-

ment administered as soon as the child is six months of age. Heretofore all the Department's leaflets and other announcements have advocated the ninth month.

County Societies

Cattaraugus County

Dr. R. M. Atwater, Cattaraugus County Health Commissioner, has resigned to become executive-secretary of the American Public Health Association at the Rockefeller Center in New York City.

Chemung County

Meeting of the Chemung County Medical Society was held January 30, in the library of the Arnot Ogden Memorial Hospital. Dr. LaRue Colegrove presided.

Dr. Colegrove opened the meeting with an expression of appreciation to the Society for electing him President for the fourth time since he became a member of the Society. Following this the Secretary read the minutes of the previous meeting which were approved and accepted. Secretary also read a letter from Dr. Colegrove to the Governor of New York State and Members of the Legislature, expressing the action of this Society as taken at a special meeting, January 16, in regard to the proposed State Insurance Fund. Dr. Colegrove then announced the Committee appointments for 1935 as follows:

Censors: Dr. Alfred J. Westlake, Dr. Charles Erway, and Dr. Alexander Mark.

Delegates: Dr. Reeve B. Howland and Dr. J. Lee Kinner (alternate).

Public Relations and Economics: Dr. Arthur W. Booth (chairman), Dr. John F. Lynch (vice-chairman), Dr. Leon Hamilton, Dr. Donald Tillou, Dr. Herbert W. Fudge.

Legislative: Dr. Elliot T. Bush (chairman), Dr. C. L. Leet, Dr. J. Lee Kinner.

Grievance: Dr. Ross Loop (chairman), Dr. John A. Bennett, Dr. S. L. Larson, Dr. F. E. Woodhouse, Dr. Arthur Glover, Dr. C. G. Zimmerman, Dr. W. T. Boland.

Public Health: Dr. Reeve B. Howland (chairman), Dr. Stewart S. Piper, Dr. Anna M. Stuart.

Postgraduate: Dr. Joseph Lewis (chairman), Dr. A. C. Smith, Dr. E. F. Butler.

Outing: Dr. R. A. Turnbull (chairman), Dr. Charles Haase, Dr. R. O. Gregory.

There were no committee reports and no business to come before the Society. The first speaker of the evening, Dr. W. P. Brown, of the School Inspection Bureau of the State Department of Health, gave a paper on the ideals of the School Medical Inspection Bureau. He pointed out that irrespective of remuneration, in order to give a reasonably good physical examination, it takes time. He believes that if the doctor doing school examinations would give an adequate amount of time to the individual

case, the standards of remuneration would be increased. He felt that the State Department, could in the future, promise to raise standards of pay. He pointed out also, that the school physician's main interest was in the prevention of disease and in bringing to the attention of the parents and the child's doctor the presence of defects at time of examination. He also told of the relationship of the school physician to the child's doctor, and pointed out that they could be of mutual benefit to the other. He begged for a more kindly understanding on the part of the general practitioner of the purpose of the school medical system. Following the paper Drs. Elston, Fudge, Voorhees, Howland, and Murphy took part in the discussion, and brought out specific points which could improve these relations.

The next speaker of the evening, Dr. Arthur W. Booth, of Elmira, spoke on what the A.M.A. is doing for the general practitioner. As a trustee of this organization, Dr. Booth is cognizant of any details of organization with which the average practitioner is not familiar. His paper showed the detailed activity that is going on continually to aid or to combat the practitioner. He pointed out the work the A.M.A. is doing to aid the public and various business organizations in the matter of better medicine. He stressed the great many items which the A.M.A. has to offer us in helping our individual practice, as well as the practice of medicine in general.

Members present were: Drs. Booth, Butler, Bleyer, Brequet, Colegrove, Cohen, Creighton, Dale, Davis, Dreyfuss, Erway, Elston, Fudge, Glover, Howland, Impert, Kinner, Loop, Leet, Lewis, Monroe, Maynard, Murphy, Smith, Stevens, Torrance, Turner, Voorhees, Westlake, and Zimmerman.

Erie County

Dr. Timothy F. Donovan, of Buffalo, died in New York City on January 31 of pneumonia, following an operation for ulcers at the Medical Center. He was 50 years of age, and was a brother of Col. William J. Donovan.

When America entered the World War in 1917, Dr. Donovan was among the first to offer his services. He relinquished a thriving private practice to accept an appointment as surgeon in the Medical Corps. He saw grinding service in the Argonne-Meuse and Alsace-Lorraine sectors. Promoted to the rank of captain, he continued overseas service until May, 1919.

Returning to the United States he devoted himself to surgery, accepting a post as in-

structor in surgery at the University of Buffalo.

At this time he was also associate attending surgeon to the three city hospitals. Dr. Donovan was a member of the A.M.A., New York State Medical Society, Erie County Medical Society, Buffalo Academy of Medicine, Omega Kappa Psi, Phi Kappi Psi, Buffalo Club, Saturn Club, Buffalo Tennis and Squash Club, Columbia University Club. He attended New St. Joseph's Cathedral.

Nassau County

The Professional Advisory Committee of the Medical Society of the County of Nassau has investigated the charges made in Freeport newspapers that a few doctors have been getting more than half of the medical relief funds, and the rest little or nothing. The committee has "studied carefully" the newspaper articles, it reports, but except for "the fact that certain doctors received what would seem to be an unreasonably large share of the funds, there is nothing in them to prove that these fees have not been earned." The committee finds "three locations in the county where the welfare work has been concentrated in the hands of a limited few doctors," and "there has been evidence that this work has been 'steered' in some cases," much of it over a year ago. A few doctors "writing unnecessary prescriptions" have been "warned that further transgression will result in their being removed from the list of those entitled to do welfare work." Others, "suspected of making unnecessary calls," have also been warned. "As a whole, however, the skirts of the medical profession have been clean. Of the approximately 360 doctors in the county, less than a dozen have been under any sort of suspicion, and some of those have been exonerated." The *Nassau Review*, the newspaper publishing the articles, is told that if it "has evidence that a single dollar has been paid to a physician in this county for work that he did not do, or if the *Review* has any evidence that a single physician has been 'buying' welfare work, the facts should be reported, preferably to the district attorney," and "if anyone has evidence that other irregularities exist they should be reported to the relief bureau or to the professional advisory committee. It must be remembered that backyard gossip and current rumor are not evidence and it is extremely difficult to correct an unsatisfactory condition unless full facts are known."

New York County

A conference on medical problems of the next war was held on February 6 at the New York Academy of Medicine, under the auspices of the Harlem Medical Association. The main subject was the problem of defense

against gas attacks. Incidentally Dr. Albert S. Hyman, president of the Association, revealed that the several hundred physicians and officers present had almost themselves become the victims of a surreptitious gas attack.

Some men carrying stench bombs were caught as they were about to plant them in strategic places in the building, Dr. Hyman revealed. They were ejected before they could carry out their plan, he said.

A number of unknown persons, however, had managed to distribute handbills demanding the abolition of war and urging physicians to join the League Against War and Fascism.

The *New York American*, in speaking of the address of Dr. William P. Murphy at the dinner of the New York Dietetic Association on February 8, referred to him as "Winner of the Hotel Prize in Medicine."

Onondaga County

Dr. George C. Ruhland, Syracuse health commissioner, has resigned to become health director of the District of Columbia. The Mayor said in an interview that "Syracuse has reason to be proud that its health record was so outstanding that Dr. Ruhland should have been sought for this important post in the official home of our President and Congress." Dr. Ruhland was director of the well-known Syracuse health demonstration, financed partly by the Milbank Fund. Under his guidance, the city has risen to rank among the 10 most healthful in the United States. Prof. Winslow of Yale estimates that with the saving of lives from the acute communicable diseases, the reduction in infant mortality and the prevention of deaths from tuberculosis during the last decade, in Syracuse, the economic value of these lives saved is approximately \$3,500,000 a year.

Queens County

Dr. Luther Fiske Warren, professor of medicine at Long Island College of Medicine, advocates the formation of a Health Council, representing all important health agencies and sponsored by the Chamber of Commerce, as the first step in an effective preventive and remedial health program for Queens.

He spoke at the second of a series of forums on "What Queens Needs," arranged by the Queensboro Council of Social Agencies and sponsored by leading civic, professional and social organizations of the borough, on February 6.

The meeting was held at P. S. 20.

Schenectady County

Dr. William Paul Brown addressed the Schenectady County Medical Society on

February 6 on "The Physician and School Health." In his report he said:

"Very informative surveys by the State Education Department show a neglect of health procedures for school and preschool youngsters. Over-tiredness is evident in 42 per cent of average children, in a study of 3,512 pupils. The foods were not proper for a large majority, and this error was made worse by the almost daily eating of candy between meals. Candy is somewhat of a food, but it is added to a diet already twice as sweet as that of any other nation, and it is often taken just before meals. Parents seem not to have training for their job, and it almost looks as if we should train all pupils for the job of parenthood while they are still in school. Dental disease is very prevalent, echoing the unbalanced foods of younger years. Early repair of teeth is surprisingly postponed. Retardation of learning is found a complication from under par condition of health.

"Twenty per cent are getting little or no milk. One-quarter of the children receive insufficient vegetables. Two-thirds are addicted to unnecessary use of laxatives. Mental abnormalities are in need of guidance,

and are a proper function of the doctor. It is apparent that the heads of families are not managing the aspects of health behavior in a reasonable degree. The family physician has a distinct function in assisting the parent in the choice of health conduct to be promoted."

Warren County

The annual meeting of the Warren County Medical Society was held at Glens Falls, January 9, 1935. The following officers were elected for the ensuing year: Dr. Leonard Hulsebosch, Glens Falls, president; Dr. George Bibby, Pottersville, vice-president; Dr. Morris Maslon, Glens Falls, secretary-treasurer.

Dr. Frederick E. Elliott, chairman of the Committee on Economics, of the Medical Society of the State of New York, addressed the Warren County Medical Society on "Current Events in Medical Economics." Dr. William P. Brown, State Education Department, spoke on "The Physician and School Health."

Drs. John E. Cunningham, Warrensburg, and H. H. Dier, Lake George were elected members of the Society.

Medicolegal

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Counsel, Medical Society of the State of New York

Plaintiff's Burden of Proof in Malpractice Action

A malpractice case* recently decided upon appeal in one of the New England States presents an interesting situation for comment in these columns.

After having undergone certain treatment at the hands of a certain doctor, the plaintiff, charging him with negligence, instituted an action to recover damages for personal injuries which he alleged were caused by the malpractice of the doctor. Before the case was reached for trial, the doctor died. Under the laws of the State in question the defense of the case was continued by the doctor's administrator, so that upon the trial the defense was naturally at a considerable disadvantage.

Upon the trial of the action, it appeared from the testimony that the doctor, whom we shall refer to as the defendant, had performed an operation upon the plaintiff, and had removed a hard growth from the underside of the upper eyelid of plaintiff's right eye, which was described as a chalazion. Previously several similar growths had been

removed from the patient's eyelids by other doctors. Three of them had affected the right eye and one had been on the upper lid of that eye. According to the plaintiff, the defendant had rolled back the eyelid, held it with a clip, applied a local anesthetic and cut out the growth, and curetted. Up to that point of the operation the patient had felt but little pain. He said that the defendant had then applied to the eye from a bottle, some drops which caused severe pain and a burning sensation. At this point it was claimed that the doctor started trembling, and had wiped out the eye and applied another substance. The patient was given some drops to take home with him for application to the eye.

The testimony showed that the defendant treated the patient for four days after the operation. The patient then entered a hospital for treatment. The diagnosis on admission was "traumatic keratitis" which was defined as inflammation to the cornea due to a wound or injury. The records showed that a large ulcerative area was present, which involved almost the entire cornea; and that a further

* *Semerjian v. Stetson*, 284 Mass. 510.

diagnosis of "ulcerative keratitis" was made. Upon the trial the plaintiff testified that the sight of his right eye was practically gone.

The plaintiff also testified that before the operation he had had a discussion with the defendant about the fact that there was no assistant present during the treatment. He testified to conversations with the defendant about the application of a "caustic" to the eye, and to conversations afterwards in which he had accused the defendant of ruining his eye, and his life and business. The plaintiff asserted that the defendant had replied, "Don't you worry. Let me worry," and that the defendant had told him he was delaying further treatment waiting for a different medicine to arrive from some other city. The defendant, he said, had also told him on one occasion that he was unable to do anything for him other than he had been doing, and gave the patient a letter addressed to a doctor at the hospital where he subsequently received care.

Upon the trial the plaintiff did not put any doctor upon the stand as an expert to establish that the defendant had failed to conform with proper standards of care or to establish a causal relation between the claimed negligence and the injury. He contended that the testimony above referred to constituted sufficient evidence to show admissions of negligence by the defendant. At the close of the plaintiff's evidence the defendant rested his case, putting no witnesses on the stand. Thereupon the trial court directed a verdict in favor of the defendant.

An appeal was taken, and the Appellate Court affirmed the ruling of the trial court. In its opinion, it said in part:

The question here presented is whether a jury would have been warranted by reasonable inference in concluding that negligence of the doctor in putting the drops in the plaintiff's eye was the cause of the conditions which appeared after the operation. The permissible drawing of an inference by a jury is a process of reasoning whereby from facts admitted or established by the

evidence, including expert testimony, or from common knowledge and experience, a reasonable conclusion may be drawn that a further fact is established. There was here no expert evidence other than what appears in the hospital report. The mere fact that pain, inflammation, and an ulcer in the plaintiff's eye followed the operation did not justify the inference of want of proper care and skill on the part of the doctor or warrant the conclusion that these conditions were the result of the doctor's negligence. There was no evidence tending to show the source or constituent elements of the liquid put in the plaintiff's eye, the purposes for which it is commonly used, its ordinary effects and characteristics or that it was or was not in general use by doctors following or in connection with such operations upon eyelids. The mere fact that an unidentified liquid placed in an organ as sensitive as an eye was followed by pain and inflammation would not without other evidence warrant the inference by a jury that its use was improper. There was no evidence as to the character or extent of injury which might cause an ulcer in an eye; or as to the ordinary origin, characteristics, and development of such ulcers; or as to the causes which are commonly adequate to produce them. We are of the opinion that the record lacks elements which are essential before a reasonable inference can be drawn that negligence of the doctor caused the conditions appearing in the plaintiff's eye after the operation and that the common experience and knowledge of a jury of laymen cannot supply the lack. . . . The doctrine of *res ipsa loquitur* is not applicable whereas here the common knowledge or experience of men is not extensive enough to permit it to be said that the plaintiff's condition would not have existed except for negligence of the person charged.

It should be noted particularly in connection with this case that when the action came on for trial, the defendant doctor had passed away. Such a situation could not occur in New York, for in this State the law has been well settled for many years that actions for personal injuries abate with the death of the defendant, and it has been established that malpractice actions based upon claims of improper and unskillful treatment are included in the category of such actions for personal injuries.

MEAT AND STAMMERING?

An absence of meat in the diet of an infant or child may be a predisposing factor in causing stammering, according to Dr. Knight Dunlap, of the Department of Psychology, Johns Hopkins University. In a report of his findings in *Science*, Dr. Dunlap says that he has come to this conclusion from a study of childhood history of a number of stammerers who have come to him for treatment.

"From the age of two years, there is no reason why children should not have meat at least twice a day," Dr. Dunlap said. "In many cases where the diet has previously been badly managed, the problem may be to induce the child to eat a sufficient quantity.

Variety of meats and of preparation, with good psychological technic, offer the solution to this problem. Overcooked meats should probably be avoided." Whether a full meat diet would aid the adult stammerer is conjectural, Dr. Dunlap said.

"The situation of the adult stammerer is of course, quite different from that of the stammering child or adolescent," he said. "That which may have a predisposing cause in infancy may have other bearings in adult life. Since a surprisingly large number of adult stammerers are relative vegetarians, it would seem possible that meat diet would be advantageous to many of these cases."

**HEARING RECLAMATION AND PRESERVATION IN THE
MODERATELY DEAFENED CHILD****Management and Treatment Based on Ten Years
of Clinical and Laboratory Research****EDMUND PRINCE FOWLER, M D
NEW YORK CITY**

The term deafness is used very loosely. It may mean anything from a slight dullness of sensation to a total loss of sound perception. It is the author's custom to designate deafness or loss of hearing, or impairment of hearing as slight, moderate, severe, very severe, and total, and to think of these designations as approximately equivalent to the following losses in sensation units:

Slight Not over 20 SU* down from average normal

Moderate Over 20 to not over 40 SU down

Severe Over 40 to not over 60 SU down

Very severe Over 60 to the lower limit
Total When very loud sounds are felt, but not heard

(If desirable one may add "Extreme" for losses over 80 to the lower limit.) This nomenclature lends itself readily to the adverb forms slightly, moderately, and severely deafened, and so on.

Many persons with slight hearing losses (up to 20 SU) do not realize they are deafened until accurately tested, and their friends may not realize their deafness, especially if only one ear is subnormal. Even severe deafness may be present without realization by the subject or his comrades. In one school the author detected four children totally deaf in one ear, all of whom denied any deafness. All

this shows the necessity of scientifically testing school children before they begin their schooling and at regular yearly intervals thereafter.

The author is aware that a few otologists believe that there is no use in examining school children because "deafness in childhood from otitis media alone or accompanying bodily disease is self-limited, and largely tubotympanic in etiology, that treatment benefits little, and that otitis media never causes progressive deafness." He disagrees with these beliefs.

Severe bilateral deafness compels recognition and suggests efforts for alleviation and management, but moderate deafness is often not realized as a handicap or not realized as existing at all. Hence the severely deafened child often secures much attention both as to treatment and management, and the moderately deafened child little or none. Deafness on the average responds to treatment in an inverse ratio to its severity and chronicity, so that very severe deafness responds but little to treatment. But severe deafness is usually preceded by moderate or slight deafness, and deafness in one ear is often followed by deafness in the opposite ear. The author's experience shows that moderate and slight deafness may be and often is benefited, and potential and increasing deafness forestalled by proper management and treatment. It is his intention therefore, to discuss particularly the moderately deafened school child and to show the amount of handicap and the amount of relief that such a child may experience depending upon the failure or the success of management and treatment.

When, in order to hear a moderately

* A sensation unit (a decibel) is the minimum amount of change in loudness of a sound that can be sensed by the human ear. As loudness is sensed logarithmically a sensation unit (SU) at the threshold of hearing will represent a change much less than at intensities 10, 20, 30, 40, and so on, units above threshold. In fact the sensation scale as plotted upon the audiogram chart makes the units increase in the ratio of 10, 100, 1,000, 10,000 and so on.

FAMILY NAME OF CHILD GIVEN NAME SEX BORN MO. DAY YR.

NAMES OF PARENTS OR GUARDIANS

DID CHILD () OR PARENT () KNOW HEARING WAS IMPERFECT?

SPEECH: EXCELLENT: FAIR: POOR:

HEARING LOSS R : 4A AUDIOMETER : L

CAUSE (ATTRIBUTED) AGE 15 IF WHAT AFFECTS IT MOST? GOLDEN SWIMMING DRUGS (ESP. QUININE, SALICYLATES ETC.) NOTICED EARLY? COLD? WEATHER? OTHER?

PAST ILLNESSES

DATE R L DATE VERTIGO

TONSILS AND ADENOIDS REMOVED

WHAT MEMBERS OF FAMILY HAVE HAD HEARING AFFECTED OR ANY EAR TROUBLE?

SCHOOL ADDRESS GRADE GRADES REPEATED

HISTORY TAKEN BY: DATE

STATEMENT BY OTOLOGIST OTHER THAN SCHOOL EXAMINER

MY OBSERVATIONS COINCIDE WITH ABOVE. MY OBSERVATIONS DIFFER AS FOLLOWS:

I ADVISE TREATMENT AS FOLLOWS:

INDICATE YES OR POSITIVE BY PLUS MARK; THUS, + IDEGREES BY +, ++, +++ OR ++++ INDICATE NO OR NEGATIVE BY MINUS MARK; THUS, -

RIGHT PINNA & EX. AUD. CANAL LEFT

DIAGNOSIS ADVISE

DR. SCHOOL OTOLOGIST. DATE

WEDER GALTON

loud sound, it is necessary to get nearer than is usual, deafness should be suspected, but the ordinary spoken voice and many teachers' voices are so loud, that it requires on the average a loss of 30 to 40 S.U. in hearing acuity before much inconvenience is experienced. As a matter of fact if a classroom is noisy and the teacher tends to speak very loudly, the moderately deafened pupils may be benefited by the noise, first because of the increased loudness of the teacher's voice, and second, because the disturbing sounds are less noticeable to the deafened than to the normal hearing pupils—i.e., the paracusis Willisiana phenomenon.

The author's investigations show that when the hearing of a child is down 30 S.U., it means that if this child is to hear as well as a normal pupil on the back seat of a 30-foot schoolroom, he must be moved to within approximately three or four feet from the teacher. And even then he will be at a disadvantage as compared with those on the back seat, because whenever the teacher moves away from her desk, the speaking distance will usually be increased. For normal hearing this makes but little difference because tests show that in "live rooms" the loudness of the voice does not vary much unless the hearer is within four feet of the speaker, but for defective hearing it is imperative that the speaking distance be maintained near four feet so that the intelligibility may remain above the threshold for adequate understanding.

When a child's hearing is down 40 S.U., it means that in this same 30-foot school room he must be placed within a foot or two of the teacher to make the latter's voice appear as loud as to the normal hearing children sitting 30 feet away. Of course, this does not mean that the deafened child cannot otherwise hear the teacher at all. It means that what he or she hears is fainter, indistinct, and often unintelligible, because words, letters, or phrases are missed. These distance requirements are usually impossible to satisfy, though the scholar be given a front seat, and so our efforts may be insufficient for the desired results. What then should be done for the deafened child and especially for the moderately deafened child?

The most important thing is to discover the presence of the hearing defect. This is best accomplished by routine group tests using the 4A audiometer. After screening out those with hearing losses of less than

9 S.U., one proceeds along the following lines:

First, a careful functional test and otological examination are made, with subsequent follow-up, not only for those showing defects in hearing but also for those with histories of or suggestions of past ear pathology. The latter are regularly ignored, but experience demonstrates many such will subsequently develop deafness, and that at least one in twenty will have otosclerosis with or without deafness.*

The accompanying form was devised for a survey of 600,000 school children now proceeding in New York City. This is one-half of the total public school pupils in the greater City.† This chart while not perfect from the broader otologic standpoint, will serve as a guide for school examinations, and if every item is taken up in turn and carefully gone into, not only will we have some worth while statistics, but at comparatively small expense of time and money the children will have obtained an examination far better than any heretofore obtained on a large scale, and not so regularly obtained even on a small scale. Space prevents detailed discussion, but the questions are largely self-explanatory. The answers to these, and the 2A audiogram charts are filled in by the teacher-technician or nurse. Some 300,000 histories and several thousand audiograms have been completed to date. Both A.C. and B.C. are tested, and charted with the same base line as the normal. This is the simplest and by far the most satisfactory method of charting the functional tests. It is the only way in which complete and accurate data can be quickly obtained to aid in diagnosis and to establish a record from which future changes in function may be estimated. No very satisfactory method of testing the preschool children in groups has as yet been discovered.

Especial notice should be paid to the

* "Otosclerosis Complicated by Other Lesions," *Ann Otol Rhin. & Laryngol* Vol 42, p 714

† This survey is the result of the constant efforts of the New York League for the Hard of Hearing, Inc., Mr. George Chatfield, and the co-operation of the District Superintendents. It was made possible by the aid of funds from the Department of Education and the C.W.A. Two hundred and eighty teachers were instructed in the teaching of lip reading, and in the use of the 4A and 2A audiometer by Miss Estelle E. Samuelson of The New York League for the Hard of Hearing, Inc.; Mr. Daniel Caplin, Assistant Director of Health Education, was in immediate charge of the project and the author's own efforts were concentrated upon the medical aspects, especially in training the otologists and teachers in the use of the chart and in obtaining co-operation from the New York Academy of Medicine and the various County Societies, and the Hospital Clinics and the otologists generally.

questions which are designed to bring out inflammatory etiological factors, the underlying cause of most of the acquired deafness of childhood; also to each item in the otoscopic examination, and under diagnosis the new term "Past Masked Otitis Media (purulent or nonpurulent)." This was coined to cover those cases giving no history of inflammatory otitis, and yet showing unmistakable signs of past trouble, such as healed or open perforations, scars, congestions, adhesions, retractions, diminished motion, and so on, of the membrana tympani, tensa or flaccida.

Second, one should insist that advice and treatment be carried out, as otherwise there will be little or nothing accomplished by the otological examination. The school otologist checks or inserts the diagnostic findings and indicates what treatment if any is advisable. If the private or clinic otologist disagrees with these findings or the advice, he writes his own opinions in the space provided for this purpose. By having both otologists commit themselves in writing it is hoped that both will be kept aware of one another's critical examination and data, and be more thorough than is usual. The greatest difficulty is to obtain proper advice and treatment for the non-surgical cases. These, as a rule, are treated with little consideration, and as has been stated before, 50 per cent of them could as well stay at home, since loss of time and often routine ill-advised catheterization, nose operations, douches, packs, and sprays may do them more harm than good. Prevention is of the utmost importance and should be stressed in every case.

The school otologists instructed in the use of this chart will have obtained an outline for careful work, which it is hoped will make a favorable impression, and perhaps serve as a wedge to penetrate into the do-nothing attitude of parents, teachers, many general practitioners, and even some otologists. To obtain quicker and more permanent results home treatment is often of service.

Third, one should insist upon lip reading, not only as an immediate aid to the hearing, but as a partial insurance against possible future increased deafness.

Fourth, a front seat is imperative, not only for better hearing but for better lip reading. In every school one or more teachers should be trained in the teaching of lip reading, and all teachers in properly using their lips in articulation. We are

now trying to do these things in New York. Presently the author will show the value of lip reading by actual measurements of the intelligibility of the teacher's spoken words.

Fifth, teachers should favor even the very moderately deafened children by clear enunciation and repetition and position, so that these children may simultaneously not only hear the teacher but clearly see her lips. Clear enunciation and a clear view of the lips is important not only for the deafened children, but for the majority of children with perfect hearing, because both otherwise may continue to mimic the often strange and distorted word sounds heard among their fellows and at home.

Sixth, a moderately deafened child should never be relegated to a special school for the hard of hearing. He or she should carry on in the regular classes. It is here that more normal development and adjustment will obtain.

The handicap of deafness, *per se*, is not the most cruel thing that happens to these children. The most cruel thing is the handicap of *never having been permitted* adequately to hear the common words and thoughts of others. This handicap due to faulty care often wrecks the child's life. It gives the little one an appearance of stupidity when really no stupidity exists, and because of limited vocabulary and inadequate expression and the impossibility of easy companionship, it engenders the psychological maladjustments peculiar to extreme deafness. This suffering is brought about largely because of thoughtless resistance to measures which appear to apply to but a small number of students (the severely deafened), but which really apply to many whose hearing by superficial standards may appear sufficient for ordinary needs. This suffering may be largely overcome by proper guidance. The moderately deafened and even the severely deafened should be able to go through lower, upper, and high school, and through college, if they receive attention in the ways indicated herein.

Seventh, if the maneuvers mentioned above do not adequately supplement the deficient hearing, the hearing must be increased by other aids, such as individual hearing devices or the microphone with ear-piece receiver. (The loudspeaker and large horns built into the students' desks have proved unsatisfactory.) With the aid of the Staff of the Bell Telephone

Laboratories* the author has tested in the classroom children with various degrees of deafness and submits herewith a résumé of some of the data obtained from those moderately deafened.

Twenty-five children were tested on March 3† and 22 children on April 28, 1934. The accompanying table shows the results from the 20 moderately deafened children tested on April 28, dividing them into 3 groups according to their hearing losses, and the average group intelligibilities obtained.

The results have further been condensed by averaging some of the data, first, from the air tests, second, from the lip reading tests, and third, from those hearing aid tests in which the caller was speaking toward the microphone and within three or four feet of it. When the caller was more than four feet from the microphone the hearing aid gave practically no consistent advantage to the observer. Average values for the individuals and for the observer groups are given in the accompanying chart, "Individual Audiograms and Average Results." For Groups 1 and 2 the data show rather small variation as between the different testing conditions. A few children show diametrically opposing results, which demonstrates the necessity of studying individual cases and of using average values. The conclusions obtained from these tests substantiate those obtained from the results on March 3, so that the following conclusions are based on all of the results obtained to date.

The first group (with hearing losses less than 30 S.U.) misses part of the oral work, but the advisability of using a hearing aid is doubtful. The increased intelligibility obtained when speaking numbers was so slight that no significance could be attached to it. The test made on March 3 indicated that the school set-up was an impediment when words were used, while the tests made on April 28 showed practically no change. This discrepancy is due to the greater efficiency of the hearing aid used in the second tests. A front seat and individual consideration appear to give greater satisfaction than a hearing aid alone.

The second group (with hearing losses more than 30 S.U. but less than 40) showed some who might be classed with the first

group and therefore will probably not receive much assistance from hearing aids, and some others who did so badly in the air tests (without any aids) that they would undoubtedly benefit from hearing aids, and might therefore be grouped with those having approximately 40 S.U. hearing losses. The second group is, therefore, the dividing group between those needing electrical aids and those not needing them for their class work. Each child will require individual trials to determine this point.

The third group (with hearing losses near 40 S.U.) showed every member missing part of the test material, whether words or numbers, and that the benefit derived from the hearing aid varied greatly as between individuals and also for the type of test material used. However, a very noticeable gain was obtained when the speaker was less than four feet away from the microphone. A circuit having approximately 20 d.b. loudness gain should be used and individuals with hearing losses greater than 35 S.U. who are not definitely helped by such an aid would be the exception rather than the rule. Since the results appear to be so much better when the teacher is near the microphone, one microphone should be placed near the teacher's desk and a second microphone located at some advantageous point along the blackboard—the latter to be brought into use when required by a switch used by the child.

Every group tested and practically every individual was aided by lip reading. The three or four students who had not received much special training showed a less definite gain than the others.

The audiogram chart allows one to visualize the hearing capacity of each child and the figures show the improvements under the varying tests. It also makes it clear that even among these moderately deafened children there are many who will have low intelligibility results in spite of lip reading and in spite of hearing aids.

Eighth, special schools for the very severely deafened, and for the moderately and severely deafened who lack sufficient knowledge of language to carry on in the regular classes, should be advised. As soon as these are capable of rejoining the regular classes they should do so.

Ninth, medical care is important when indicated. For the moderately deafened child it is always indicated in some meas-

* Tested in a classroom at the New York League for the Hard of Hearing, Inc.

† The March 3 data are omitted here because they concern more the severely deafened.

TABLE TESTS ON HARD OF HEARING CHILDREN AT THE NEW YORK LEAGUE FOR THE HARD OF HEARING, APRIL 28, 1934

Obs.	Test No. Caller Pos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	Group I Average
13	Age H. L.	100	100	100	100	100	100	90	60	80	70	80	80	100	90	100	80	90	100	90	86%
12	10	100	100	100	100	100	100	90	70	90	80	90	100	100	100	100	90	100	100	80	86%
14	23	100	100	100	100	100	100	80	100	100	60	70	100	100	100	90	70	100	100	100	85%
11	15	100	100	100	100	100	100	80	80	100	80	50	70	50	30	80	60	50	60	...	...
11	9	100	100	100	100	100	60	80	70	80	80	50	70	50	30	90	60	86	92	90	...
3	27	100	100	100	100	100	88	76	74	86	74	76	90	88	80	92	78	86	92	90	...
Average.....		100	100	100	100	100	100	76	74	86	74	76	90	88	80	92	78	86	92	90	...
5	8	100	100	100	100	100	20	30	30	20	20	20	10	40	10	0	30	20	40	30	Group II Average
15	9	100	100	100	100	100	70	70	80	70	60	70	80	80	60	50	80	90	70	20	57%
19	11	100	97	100	100	100	50	50	60	70	50	70	80	70	90	80	70	50	60	60	67%
19	14	100	97	100	100	100	80	80	50	60	60	80	70	70	60	80	60	80	80	50	71%
17	35	100	100	100	100	100	60	80	80	60	60	80	70	70	70	20	40	80	80	30	57%
17	8	100	100	100	100	100	60	80	80	60	40	80	50	...	30	30	40	30	30	30	67%
16	37	100	100	100	100	97	50	10	30	30	40	80	80	60	30	100	90	80	100	90	71%
1	9	100	100	100	100	100	100	80	80	90	80	90	90	90	90	100	90	80	90	70	...
4	37	100	100	100	100	100	90	100	80	80	80	80	90	100	90	90	90	80	90	100	...
12	38	100	100	100	100	94	80	100	90	80	70	80	90	90	80	70	60	70	90	100	...
22	9	100	94	97	90	94	80	60	90	80	60	80	90	90	20	10	80	100	90	70	...
15	38	97	90	100	100	100	80	90	90	60	60	80	90	90	20	10	80	100	90	70	...
Average.....		100	98	100	100	99	69	65	69	62	56	69	74	69	60	53	64	59	68	57	...
6	9	90	84	100	100	100	40	20	20	10	10	10	10	20	0	20	20	20	10	10	Group III Average
7	40	97	87	100	94	94	90	80	60	50	20	70	90	70	0	0	60	60	40	50	19%
8	10	94	90	94	100	97	50	40	40	10	20	60	60	60	20	10	0	0	30	30	40%
18	42	87	97	97	90	90	30	10	10	40	20	60	60	70	20	20	30	20	40	30	58%
21	43	100	100	100	100	97	60	70	20	50	50	60	90	80	70	30	60	60	40	60	...
21	42	100	100	100	100	97	60	70	20	50	50	60	90	80	70	30	60	60	40	60	...
Average.....		90	94	98	97	98	54	44	30	32	24	52	62	60	22	16	34	32	32	36	...

CALLER POSITION

- I. Seated in back of the desk facing front.
 II. Standing in back of the desk facing front.
 III. Standing at the side of the desk facing front.
 IV. Standing at the blackboard facing front.
 V. Standing at the blackboard facing to the side.

Tests 1 to 5 — Number tests with no lip reading. Hearing aid microphone hung over the desk.
 Tests 6 to 10 — Word tests with no lip reading. Hearing aid microphone hung over the desk.
 Tests 11 to 13 — Word tests with lip reading and hearing aid, microphone hung over the desk.
 Tests 14 to 15 — Number tests with no lip reading and no hearing aid.
 Test 16 — Word test with no lip reading. Hearing aid microphone hung on backboard.
 Tests 17 to 19 — Word tests with no lip reading. Hearing aid microphone set on the desk.

INDIVIDUAL AUDIOGRAMS AND AVERAGE RESULTS

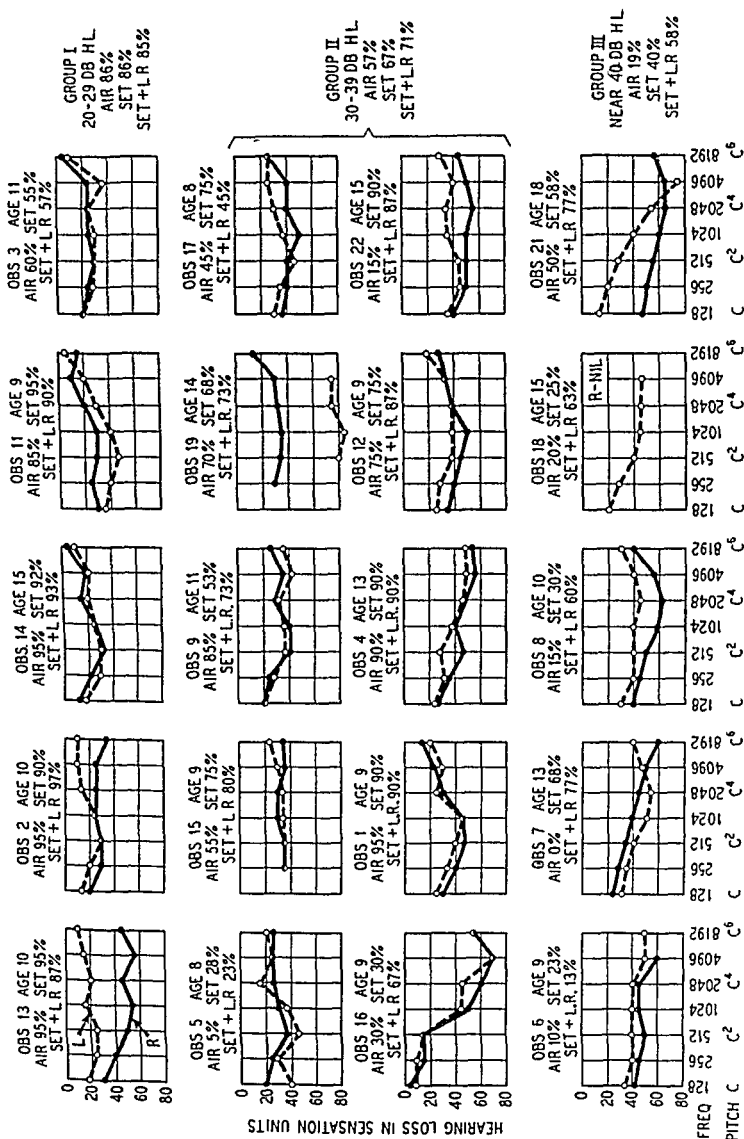


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Test No. Caller Pos.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Obs.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Age H. L.	I	II	III	IV	V	I	II	III	IV	V	II	III	V	IV	V	V	I	II	V
13	100	100	100	100	100	100	90	60	80	70	80	80	100	90	100	80	90	100	90
12	100	100	100	100	100	80	90	70	90	80	90	100	100	90	100	90	90	100	90
2	100	100	100	100	100	100	70	90	100	80	90	100	90	100	90	90	100	100	80
14	100	100	100	100	100	100	80	100	80	80	100	100	100	90	80	70	100	100	100
11	100	100	100	100	100	100	50	70	80	80	50	70	50	30	90	60	50	60	...
9	100	100	100	100	100	60	50	70	80	80	50	70	50	30	90	60	50	60	...
3	100	100	100	100	100	88	76	74	86	74	76	90	88	80	92	78	86	92	90
Average.....	100	100	100	100	100	88	76	74	86	74	76	90	88	80	92	78	86	92	90
5	100	100	100	100	100	20	30	30	20	20	20	10	40	10	0	30	20	40	30
8	100	100	100	100	100	70	70	80	70	60	70	90	80	60	50	80	90	70	20
15	100	100	100	100	100	50	50	60	70	50	70	80	70	90	80	70	50	60	60
9	100	100	100	100	100	80	80	50	60	60	80	70	70	60	80	60	80	80	50
10	100	100	100	100	100	60	80	80	60	40	40	50	60	70	20	40	80	80	50
17	100	100	100	100	100	60	80	80	60	40	40	50	60	70	20	40	80	80	50
16	100	100	100	100	100	50	10	30	30	40	80	80	60	30	30	40	30	30	30
9	100	100	100	100	100	100	80	80	90	80	90	90	90	90	100	90	80	100	90
37	100	100	100	100	100	100	100	80	90	80	90	90	90	90	90	90	80	100	90
1	100	100	100	100	100	90	100	100	80	80	90	90	90	90	90	90	80	100	90
37	100	100	100	100	100	90	100	100	80	80	90	90	90	90	90	90	80	100	90
1	100	100	100	100	100	80	60	90	80	70	80	90	90	80	70	60	70	90	100
13	100	100	100	100	100	80	60	90	80	70	80	90	90	80	70	60	70	90	100
38	100	100	100	100	100	90	90	90	90	60	80	90	90	20	10	80	100	90	70
12	97	90	100	100	100	80	90	90	60	60	80	90	90	20	10	80	100	90	70
15	97	90	100	100	100	69	65	69	62	56	69	74	69	60	53	64	59	68	57
Average.....	100	98	100	100	99	69	65	69	62	56	69	74	69	60	53	64	59	68	57
6	90	84	100	100	100	40	20	20	10	10	10	10	20	0	20	20	20	10	10
9	97	87	100	94	94	90	80	60	50	20	70	90	70	0	0	60	60	40	50
13	40	90	90	100	97	50	40	10	10	20	60	60	60	20	10	0	0	30	30
7	90	90	94	100	97	30	40	10	20	20	60	60	70	20	20	30	20	40	30
8	97	97	97	90	90	10	10	10	40	20	60	60	70	70	30	60	60	40	60
18	42	87	97	97	90	60	70	20	50	50	60	60	80	70	30	60	60	40	60
15	43	87	97	97	90	60	70	20	50	50	60	60	80	70	30	60	60	40	60
21	42	100	100	100	97	60	70	20	50	50	60	60	80	70	30	60	60	40	60
Average.....	90	94	98	97	98	54	44	30	32	24	52	62	60	22	16	34	32	32	36

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CLINICAL ASPECTS OF FORCED PERIVASCULAR DRAINAGE OF THE CENTRAL NERVOUS SYSTEM

GEORGE M. RETAN, M.D.
SYRACUSE

In 1930 I treated a case of syphilitic meningitis in an infant six months of age. This infection had produced a progressive hydrocephalus. Vigorous anti-syphilitic treatment over a period of three months failed to produce any clinical or serological improvement. The prognosis under these circumstances being universally bad, I felt justified in using any clinical procedure that might have a prospect of success. I therefore decided to alter the osmotic pressure of the bloodstream by the intravenous injection of a hypotonic solution containing an arsenical; also coincidentally to drain the spinal fluid hoping that it might be possible to draw enough arsenic through the lesions of the central nervous system to produce a therapeutic effect. The therapeutic result of this experiment was both prompt and definite. In fact, after four such treatments the patient had apparently recovered and has developed normally since.

At that time I made a careful search of the medical literature and found that this type of treatment had never been used for the treatment of infections of the central nervous system in humans. One case of trypanamide amblyopia had been reported by Casten¹ in which this principle was used.

The development of the experimental background for this treatment may be traced through the work of Starling, of Weed and McKibbin, and of Kubie. Starling² in 1909 published his studies on the formation of lymph.

The essential facts which relate to the present subject ought to be reviewed. Osmotic equilibrium between the bloodstream and the perivascular fluid spaces of the body is maintained by the osmotic action of the non-diffusible colloids of the blood and the crystalloids. Outside the capillary wall the crystalloids are more concentrated than the crystalloids of the bloodstream. This tends to balance the action of the non-diffusible colloids. Fluid movement from the bloodstream is assisted by blood pressure in the arterial capillary. Passing through the arterial capillary to the venous

side, the non-diffusible colloids are able to withdraw fluid from the tissue spaces by the aid of turgor pressure.

There are other factors influencing these forces, such as, e.g., water of metabolism; the breaking up of particles into smaller molecules, thereby multiplying their osmotic force; and certain electrical charges, not well understood.

Weed and McKibbin³ in 1919 studied the effects of the injection of hypotonic solutions into the bloodstream of animals. They found that such solutions produce hydrosis of the pericellular fluid spaces in the brain and cord and widening of the perivascular fluid pathways.

In 1928, Kubie⁴ further demonstrated this phenomenon and found that when a needle is introduced into the subarachnoid space and the cerebrospinal fluid allowed to drain, no hydrosis of the brain or cord results either in gross or microscopic sections. Kubie's work allows for the clinical application of these principles to the treatment of infections of the central nervous system. He suggested the name "forced spinal drainage."

In developing this method of treatment in infections of the central nervous system in humans, I have met with considerable difficulty as a result of the term "forced spinal drainage." A number of doctors have assumed that drainage of the spinal fluid is the essential factor. It is therefore fitting to suggest "forced perivascular drainage" as a term which more accurately describes the essential factor involved.

Within the central nervous system is found, existing under a varying degree of pressure, a lake of fluid largely derived from the bloodstream by way of the choroid plexus. Within the bony confines of the skull and spine there are no lymphatics. Their function is taken over, in part by the Virchow-Robins perivascular spaces, which form drainage channels between the perineural fluid spaces and the subarachnoid space. Through these drainage channels products of cell metabolism are carried to the spinal fluid. To increase the

TABLE I.—NO INFECTION OF THE CENTRAL NERVOUS SYSTEM PRESENT. SHOWS LACK OF CELL RESPONSE IN SPINAL FLUID DURING FORCED PERIVASCULAR DRAINAGE

(E.T. Age 7 yrs. June 17, 1932)

Hours	Spinal fluid	Cells	P.	M.	Globulin	.45% NaCl
10:05 A.M.	15 c.c.	1	0	0	None	
10:40 A.M.	15 c.c.	0	0	0	"	180 c.c.
10:50 A.M.	10 c.c.	0	0	0	"	
11:50 A.M.	36 c.c.	0	0	0	"	390 c.c.
12:50 P.M.	25 c.c.	0	0	0	"	425 c.c.
1:50 P.M.	25 c.c.	0	0	0	"	435 c.c.
2:50 P.M.	25 c.c.	0	0	0	"	370 c.c.
	151 c.c.					1,800 c.c.

drainage from these perivascular spaces it is necessary, first, to reduce the intracranial pressure to atmospheric pressure, and, secondly, to provide an increase of pericellular fluid. The first is accomplished by lumbar puncture with continuous drainage of spinal fluid; the second by the injection of hypotonic solution into the bloodstream. In cases of infection of the central nervous system, both in experimental animals and in humans, it has been demonstrated repeatedly that by use of this method products of inflammation can be washed from the inflamed areas in the depths of the central nervous system to the subarachnoid space.⁶⁻⁹

In certain diseases of the central nervous system are found collars of round cells in the perivascular spaces. In poliomyelitis this type of pathological process affects wide areas. In acute encephalitis and in Sydenham's chorea it is limited to relatively small areas. Perivascular round-cell infiltration does not represent the only type of pathology found in these diseases. There are also found hemorrhages, edema, areas of softening and actual cell destruction.

A review of 115 forced perivascular drainage treatments shows the following results in regard to cellular behavior in the spinal fluid.

1. Patients without active infection of the central nervous system fail to show any cells in fractions of fluid examined during the intravenous injection of hypotonic solution. (See Table I.)

2. Patients with syphilis of the central nervous system, of many years' duration, and who have had years of anti-syphilitic treatment, also fail to show cell response. Similar results have been obtained in cases of chronic encephalitis of six and seven years' duration. (See Table II.)

3. In cases of septic meningitis there is a steady reduction in the number of cells found in fractions of the spinal fluid throughout the treatment. These cells continue to be practically 100 per cent polymorphonuclear leukocytes. (See Table III.)

4. In cases of acute poliomyelitis, during continuous drainage, and before the hypotonic solu-

TABLE II.—C.L. CASE OF TABES OF 6 YEARS' DURATION, AFTER YEARS OF ANTISYPHILITIC TREATMENT, SHOWING NO CELL RESPONSE IN THE SPINAL FLUID DURING FORCED PERIVASCULAR DRAINAGE

(C.L. July 1, 1932.)

Time	Amount	Count	Poly	Mono	Fluid intake	Output
11:40	30 c.c.	No			Water 210 c.c.	
12:30	70 c.c.	No			0.45 NaCl. 1000 c.c.	
1:30	20 c.c.	No			Water 210 c.c.	300 c.c.
2:30	35 c.c.	No			Water 210 c.c.	200 c.c.
3:30	13 c.c.	No				
4:30	19 c.c.	No			Water 60 c.c.	
					Murphy drip 150 c.c.	700 c.c.
5:30	8 c.c.	No			Water 60 c.c.	200 c.c.
6:20	2 c.c.	No			Needle removed.	

tion is injected into the bloodstream, there is a reduction in the number of cells found in fractions of the spinal fluid. However, the relation between the percentage of polymorphs and lymphocytes in the spinal fluid is not greatly changed. If a hypotonic solution is then injected into the bloodstream there is a prompt increase in the number of cells found in fractions of the fluid with a shift to a preponderance of lymphocytes. (See Table IV.)

5. In cases of chorea, in which the cells in the spinal fluid are all lymphocytes, usually with a normal cell count, later fractions practically all contain lymphocytes, usually in increased numbers. However, certain fractions may contain no cells. These cases show in their later fractions a very small number of cells as compared to the later fractions in acute poliomyelitis. (See Table V.)

The various cellular responses of the spinal fluid mentioned above have been constant during forced drainage in all cases treated.

The cell behavior in the spinal fluid of the polio monkey does not follow the same pattern observed in the human disease. In the later fractions of the late disease in the monkey we find a higher shift to the polynuclear leukocytes than has been found in humans. (See Tables VI and VII.)

There is another principle of the greatest importance in considering this mechanism. It has to do with the movement of water from the bloodstream into the

TABLE III.—CASE OF SEPTIC MENINGITIS TREATED BY FORCED PERIVASCULAR DRAINAGE, SHOWING CELL CHANGES IN VARIOUS FRACTIONS OF SPINAL FLUID

(C.M. Age 7 yrs. January 2, 1934)

Hours	Spinal fluid	Cells	P.	M.	.45% NaCl.
10:00 A.M.		10,311	98%	2%	
11:00 A.M.	62 c.c.	864	100%		362 c.c.
12:00 M.	13 c.c.	870	99%	1%	366 c.c.
1:00 P.M.	15 c.c.	610	100%		441 c.c.
2:00 P.M.	27 c.c.	200	96%	4%	421 c.c.
3:00 P.M.	20 c.c.	110	99%	1%	461 c.c.
4:00 P.M.	10 c.c.	140	100%		486 c.c.
5:00 P.M.	30 c.c.	70	100%		371 c.c.
6:00 P.M.	35 c.c.	74	100%		292 c.c.
	212 c.c.				3,200 c.c.

TABLE IV.—CASE OF POLIOMYELITIS: FORCED DRAINAGE CHART. SHOWING THE WASHING OF ROUND CELLS FROM THE PERIVASCULAR ROUND CELL INFILTRATION BY THE INTRAVENOUS INJECTION OF A HYPOTONIC SOLUTION

Time	Amount	Count	Poly.	Mono.	Fluids
1:45 P.M.	7 c.c.	739	90+		Spinal Puncture
2:20 P.M.					Drainage started
2:50 P.M.	45 c.c.	264	90+		400 c.c. water
3:20 P.M.	31 c.c.	136	90+		
6:20 P.M.	11 c.c.	98	90+		
					.. vomited
10:00 P.M.	15 c.c.	47	90+		
12:15 A.M.	2 c.c.	38	90+		1 drop 6 minutes
Forced Drainage Begun					
1:30 A.M.	32 c.c.	174	20	80	1030 c.c. 0.45 NaCl. 30 c.c. serum 11 to 16 drops per minute
3:00 A.M.	42 c.c.	134	8	92	480 c.c.
6:30 A.M.	75 c.c.	147	4	96	390 c.c.
					7:30 vomited
9:30 A.M.	50 c.c.	155	35	65	280 c.c. 9:10 vomited — severe headache
12:30 P.M.	30 c.c.	56	23	77	420 c.c. 10:00 vomited — wte in.
4:30 P.M.	20 c.c.	54	26	74	310 c.c. 1:30 severe pain right leg
5:30 P.M.	10 c.c.	83	28	72	180 c.c. Severe headache. Wte out
6:05 P.M.	65 c.c.	121	29	71	Needle removed
	429 c.c.				

TABLE V.—CASE OF CHOREA: FORCED DRAINAGE CHART. SHOWING THE WASHING OF ROUND CELLS FROM THE PERIVASCULAR ROUND CELL INFILTRATION BY THE INTRAVENOUS INJECTION OF A HYPOTONIC SOLUTION

(November 4, 1931)

Time	Amount	Count	Poly.	Mono.	Fluids
9:00	85 c.c.	1	0	1	230 c.c. of 0.45 NaCl intravenously
10:00	52 c.c.	7	0	7	600 c.c. of 0.45 NaCl intravenously
11:00	37 c.c.	1	0	1	600 c.c. of 0.45 NaCl intravenously
12:00	35 c.c.	Bloody			600 c.c. of 0.45 NaCl intravenously
1:00	26 c.c.	3	0	3	200 c.c. of 0.45 NaCl intravenously
2:00	5 c.c.	0	0	0	50 c.c. by mouth
	240 c.c.				

TABLE VI.—BLOOD VOLUME CHANGES DURING INTRAVENOUS INJECTION OF 0.375 PER CENT NaCl IN EARLY POLIOMYELITIS ON THE FIFTH DAY FOLLOWING INTRANASAL INOCULATION

(Macacus rhesus, No. 20. Weight 2,721 Gms. March 20, 1934)

Time	Intravenous	Spinal fluid	Red cell count	Medication	Urine
11:15 A.M.	120 c.c.	3.6 c.c.	4,780,000		56 c.c.
11:45 A.M.				.025 pyressin	
12:15 P.M.	90 c.c.	1.6 c.c.	4,190,000	.025 "	50 c.c.
1:15 P.M.	73 c.c.	2.2 c.c.	4,440,000		14 c.c.
2:15 P.M.	37 c.c.	1.4 c.c.	4,780,000	.025 "	7 c.c.
2:30 P.M.					
3:15 P.M.	75 c.c.	1.8 c.c.	4,870,000		49 c.c.
4:15 P.M.	58 c.c.	1.6 c.c.	4,830,000		15 c.c.
5:15 P.M.	77 c.c.	1.7 c.c.	4,490,000		0
5:20 P.M.				.025 "	
7:15 P.M.	94 c.c.	2.0 c.c.	4,880,000		117 c.c.
8:15 P.M.	64 c.c.	(Spinal needle removed)			48 c.c.
8:40 P.M.				.025 "	
10:15 P.M.	108 c.c.	1.9 c.c.	4,280,000		49 c.c.
	816 c.c.	17.8 c.c.			405 c.c.
Weight gain	385 gm.	(385 c.c.)	Resp. and skin loss 8.2 c.c.		

TABLE VII.—BLOOD VOLUME CHANGES DURING INTRAVENOUS INJECTION OF 0.375 PER CENT NaCl IN LATE POLIOMYELITIS ON THE SEVENTH DAY FOLLOWING INTERCEREBRAL INOCULATION, DURING STAGE OF PROSTRATION

(Macacus rhesus No. 21. Weight 3,281 Kgms. March 29, 1934)

Time	Intravenous	Spinal fluid	Red cell count	Medication	Urine
5:10 P.M.	88 c.c.	0	5,030,000	.025 pitressin	
5:40 P.M.	27 c.c.	0.8 c.c.	3,130,000	1/9 gr. pantapon	22 c.c.
7:10 P.M.	73 c.c.	1.0 c.c.	3,080,000		12 c.c.
8:10 P.M.	51 c.c.	1.2 c.c.	2,000,002	.025 pitressin	26 c.c.
9:10 P.M.	50 c.c.	1.0 c.c.	4,760,000		43 c.c.
10:00 P.M.	51 c.c.	1.1 c.c.	4,890,000		22 c.c.
	340 c.c.	5.1 c.c.			125 c.c.

Weight gain 29 gms. (29 c.c.) Resp. skin loss and unaccounted fluid 181 c.c.

TABLE VIII.—SUMMARY OF CASES OF SYDENHAM'S CHOREA TREATED BY FORCED PERIVASCULAR DRAINAGE

Case	Age	Duration	Severity	Cells in orig. fl.	Cell resp.	Sol.	Amt. c.c.	Recovery
1.	10 yrs.	3 wks.	Moderate.	1	7	.45	2280	2 days
2.	11 yrs.	3 yrs.	Moderate.	23 a	169	.45	1000	Imp.
	11 yrs.	3 yrs.	Moderate.	3	29	.45	1000	3 days (10)
3.	10 yrs.	4 mos.	Moderate.	1	7	.45	3000	
	10 yrs.	4 mos.	Moderate.	15	8	.45	4000	No recovery
4.	8 yrs.	3 mos.	Slight.	0	6	.45	3000	2 weeks
5.	14 yrs.	1 yr. R.	Moderate.	2	2	.45	2000	Imp.
	14 yrs.	1 yr. R.	Moderate.	0	2	.45	2000	5 days (2)
6.	11 yrs.	10 days.	Very severe.	1	9	.45	3000	Imp.
	11 yrs.	10 days.	Very severe.	1	9	.45	2330	10 days (3)
7.	11 yrs.	1 wk.	Moderate.	4	5	.45	2500	Imp.
	11 yrs.	1 wk.	Moderate.	2	18	.45	2000	5 days (2)
8.	11 yrs.	20 days.	Moderate.	1	6	.375	2200	2 days
9.	17 yrs.	2 wks.	Moderate.	18	bl.	.45	1500	Imp.
	17 yrs.	2 wks.	Moderate.	68 c	81	.45	1800	2 days (7)
10.	17 yrs.	1 mo.	Moderate.	2	30	.45	4550	5 days
11.	7 yrs.	1 mo.	Moderate.	5	5	.45	2150	3 days
12.	8 yrs.	4 wks.	Slight.	0	4	.375	1775	2 days
13.	9 yrs.	10 days.	Moderate.	1	6	.45	3000	2 days d
14.	7 yrs.	2 wks.	Moderate.	3	9	.45	2000	Imp.
	7 yrs.	2 wks.	Moderate.	2	7	.45	2000	7 days

a Encephalogram had been done two weeks previously.

b Case used for pressure reading experiment.

c Not sure of laboratory counts.

d Case developed signs of cerebellar herniation.

Nos. signify period of days between two treatments.

pericellular tissue spaces in inflamed areas where there is increased permeability to fluids. If the osmotic pressure of the bloodstream be reduced by the injection of hypotonic solutions, the change in osmotic force will be largely exhibited at the point of least resistance which is the inflamed area. In case there is an active inflammation of the lungs, an edema of the lungs will occur almost as soon as the hypotonic solution enters the bloodstream. I have observed this in cases of latent tuberculosis and influenzal bronchitis. In several of my cases pyuria was present resulting in a copious excretion of urine. This materially interfered with the fluid passing through the central nervous system. In these cases no pus was found in the urine following the treatment. I have also observed in one case of tuberculosis meningitis with an acute colitis, a profuse excretion of water from the bowel during the intravenous injection.

TABLE IX.—I. P. CASE OF SYDENHAM'S CHOREA WITH HISTORY OF RECURRENT ATTACKS DURING THREE YEARS, SHOWING INCREASED CELL RESPONSE (MONONUCLEAR) DURING FORCED PERIVASCULAR DRAINAGE

(I. P. White Female. Age 7 years. May 12, 1932)						
Time	Amount	Count	Poly	Mono	Fluid intake	Output
10:00	68 c.c.	3	0	3	1000 c.c. 48 saline	
11:00	35 c.c.	14	0	14		
12:00	19 c.c.	13	0	13	150 c.c. orange juice.....	vomited
1:00	35 c.c.	30	0	30		vomited
2:00	25 c.c.	29	0	29		
3:00	15 c.c.	22	0	22		vomited
4:00	20 c.c.	24	0	24		
5:00	13 c.c.	18	0	18		
6:30						400 c.c.

Sugar — 61 mgs.

Clinical research involving the use of a therapeutic procedure is difficult of interpretation. Evaluation of the subject at hand is further complicated by the wide variation possible in technical procedure. In addition, the responses of various clinical cases of the same disease are not comparable. Preventing paralysis in a case of

pre-paralytic poliomyelitis by a therapeutic agent may have no significance. Possible changes in the behavior of the patient may be significant to the physician who observes them. Poliomyelitis is not the most desirable disease in which to demonstrate various procedures, for fear of erroneous conclusions. This is equally true of central nervous system lues. Sydenham's chorea, on the other hand, is a more ideal disease on which to base conclusions as to the effectiveness of this therapeutic agent. The nature of this disease is one of slow progress in which the patient rarely shows marked and spontaneous improvement from one day to another. In my experience I have rarely seen an exception to this statement.

Before any definite statement can be made regarding the effectiveness of forced perivascular drainage in the treatment of poliomyelitis it will be necessary to obtain statistical evidence. Four cases of pre-paralytic polio have been treated in the human, all of which recovered without any paralysis or muscular weakness. This statement from a statistical viewpoint is of course of no value. The clinical observation of the behavior of these patients is of value. The fact that these patients lost their tremor and nervous irritability during the treatment is encouraging. Two patients with bulbar paralysis, existing for three and five days, respectively, showed prompt improvement in their paralysis.

Experimentally produced polio is a very serious disease in the monkey. It is so severe and rapid in its course that it cannot be compared to the human disease. We have been able to treat the monkey with forced perivascular drainage and have definitely modified the course of the disease. (In this work Dr. Chapman has been associated with me and we will subsequently publish a report.)

My present conception regarding the treatment of this disease is as follows. Forced perivascular drainage will modify acute poliomyelitis both in the human and in the Macacus rhesus. The technic which will produce the best results in human polio has not yet been worked out. It is highly desirable that a study of this kind be done by someone who thoroughly understands the subject and is conversant with the technical variations possible.

The pathological findings in Sydenham's chorea have not been constant. Hyperemia, minute embolus, petechial hemorrhage,

and perivascular round-cell infiltration have been reported. The latter has not been a constant finding. This type of chorea has been classified by various authors as an infectious disease, as a symptom of generalized infection, and as a functional disease. Its intimate relation to rheumatic fever is accepted by all. The fact that in all of the fourteen cases which I have treated by forced drainage, round cells were found in the later fractions of the spinal fluid would lead us to believe that a perivascular round-cell infiltration was present in each case, and that the small number of cells obtained in these fractions as compared to the number found in poliomyelitis would argue for a small area involved.

I have summarized my experiences in the treatment of Sydenham's chorea. (See Table VIII.) Fourteen cases have been treated. There has been one failure. In the case that did not improve (case 3), I varied my technic considerably in order to make some pressure studies. (See Table IX.) The spinal needle was attached to a two-way tube, one tube running to a manometer and the other tube being clamped. At intervals the clamp was removed and a small amount of fluid allowed to drain. This type of technic ignored one of the fundamental principles involved, which is mentioned above, that of reducing the pressure of the spinal fluid to atmospheric pressure. Later when I endeavored to give the patient an adequate treatment the mother refused.

I have found that mild cases of hemichorea have been most resistant to treatment. Therefore in the last two cases I changed my solution to 375 per cent NaCl with prompt and complete recovery in two days. Further studies are necessary to determine if this will be constant.

PRESENT TECHNIC AND PROCEDURE

The patient should be prepared three hours previous to treatment by giving food high in protein content and about three glasses of water. In case of dehydration a clysis of normal saline should precede the forced drainage, after which lumbar puncture should be performed with the patient on a Bradford frame. The Queckenstedt sign should then be tested. A specimen of spinal fluid should be gathered for laboratory examination, care being exercised not to remove too much fluid. The stylet is then replaced in the needle and the spinal

needle should be rotated gently in order to enlarge the opening in the dura. The patient is rotated on the Bradford frame with the needle protruding through the window. An intravenous injection of hypotonic solution should be given and in case the patient is delirious or has a severe chorea the internal saphenous vein is the vein of choice for the reason that the foot can be easily mobilized to the frame. In children and babies it is often desirable to tie the needle into the vein. In patients over fifty pounds in weight the injection should be given at the rate of about one liter an hour. When the flow of the intravenous solution has become established the stylet is removed from the lumbar needle and the fluid allowed to drain. If the fluid spurts the stylet should be introduced intermittently until a steady drop has been secured.

The drainage of spinal fluid may now proceed without interruption. If the patient develops frontal headache an ice cap or an injection of codein may be used. If the headache is suboccipital or if it is followed by vomiting the stylet should be inserted for a period of about 15 minutes after which drainage can again proceed. Headache can also be controlled in many cases by increasing the rate of flow of the hypotonic solution.

In case the flow of spinal fluid ceases altogether a slight rotation of the needle upward and the introduction of the stylet into the needle will usually re-establish the flow. Should this occur early in the treatment and should the spinal drip not be established after a period of about 15 minutes, the intravenous should be stopped and a second lumbar puncture done. If it should occur late in the treatment, particularly following a free drainage of spinal fluid, it constitutes no reason for discontinuing the intravenous. Following the completion of the intravenous a very short subsequent drainage should be allowed in selected cases. I am not convinced that this subsequent drainage is of great therapeutic value and it is often advisable to discontinue the treatment at the completion of the intravenous.

Following the treatment it is advisable to give a Murphy drip of normal saline.

I believe that forced perivascular drainage is a safe procedure if understood by the operator and properly carried out. I further believe that the only grave danger is that from cerebellar herniation into the

foramen magnum. The treatment can be carried out in such a way as to prevent the possibility of cerebellar herniation. The recognition of this condition is also possible before any serious accident can occur. In my series I have met this condition twice.

My first encounter with cerebellar herniation occurred after I had been working with this method for two and a half years. This treatment was conducted by one of my associates while I was out of the city. Certain procedures were carried out which were not according to instructions. The patient, a girl of nine, had entered the hospital with acute rheumatic fever. She had developed chorea during convalescence and was treated 10 days after its beginning. A new floor supervisor, unaccustomed to this form of treatment prepared the patient as if for operation. No breakfast or fluids were given; 30 c.c. of spinal fluid was collected for some special laboratory tests. The patient began vomiting at the beginning of the intravenous; 3,000 c.c. of 0.45 per cent NaCl was injected during a period of four hours. The patient vomited six times during this treatment. No occipital or suboccipital headache was complained of. The pulse rate continued around 120 and the respirations at 28 showing very little change during the treatment; in fact, the only untoward event was the vomiting.

After the completion of the intravenous the spinal fluid was allowed to drip for one hour and a half. Five minutes after the completion of the drainage the patient developed severe generalized convulsions with tremors over the whole body. The arms and legs were rigid. There was deep cyanosis. Temperature was 97 degrees; pulse weak, irregular and rapid. The convulsions were controlled by ether inhalations, following which CO₂ and oxygen were given and a hypodermic of caffeine-sodium benzoate (grs. 7½). The patient's condition was improved and a lumbar puncture was immediately done to determine the spinal fluid pressure. This was found to be 4 mm.Hg. Clonus could be easily produced at the ankles and fingers and seemed inexhaustible.

There was a second convulsion four hours later which was less severe and a very slight convulsion a half hour after this. At this time the pulse was 126, respirations 28. During the next twelve hours the patient slept. Her color re-

mained good. She voided several times involuntarily but at no time was there any complaint of pain in the suboccipital region nor was there any retraction of the neck. The next morning she ate her breakfast and seemed none the worse for her experience. The following day her condition was excellent and her choreiform movements had entirely ceased.

The objections to the procedure used in this case are as follows:

1. Food and especially fluids should not have been omitted before instituting treatment.

2. Too much spinal fluid was removed before the intravenous injection was given.

3. The stylet should have been replaced in the needle for a short time on the advent of the vomiting and perhaps a second or third time for a short period in case subsequent vomiting occurred.

4. The hour's drainage following the completion of the intravenous should not have been allowed.

The second case was one of bulbar poliomyelitis with complete paralysis of the throat of five days' duration. There was partial paralysis of the legs, 106 cells in the spinal fluid, 92 per cent lymphocytes, with a pressure of 6 mm. Hg., jugular compression producing increased pressures recorded by the manometer. He was given 2930 c.c. of 0.45 per cent NaCl intravenously. A half hour after the treatment had begun his tongue protruded in the midline and continued to do so. Three hours after the beginning of the treatment his abdominal reflexes which had been absent returned but later were not obtained. His speech was improved. Treatment was further uneventful; no untoward symptoms developed. Following this he was given a Murphy drip of 400 c.c. of normal saline. Having showed considerable clinical improvement, he was given a second treatment 17 hours later. Ability to swallow fluids had not returned. He was given 1,300 c.c. of 0.45 per cent NaCl. There was complaint of severe suboccipital headache but no vomiting. Pulse rate and temperature were not disturbed.

At the completion of the intravenous the patient was given a Murphy drip of normal saline and spinal fluid allowed to drain for one and a half hours. One hour later he was cyanosed and developed a jerky type of respiration. Pulse was irregular, rate 50, poor quality, large, coarse, bubbling râles in his chest. He was placed in a

respirator and expired in ten hours. Autopsy revealed a collar-shaped ridge in the cerebellum from contact with the posterior rim of the foramen magnum. There was marked edema of the brain. It was the pathologist's opinion that herniation was not sufficient to cause death.

Bennett describes the symptoms of cerebellar herniation as follows: "Suboccipital pain with retraction of the head, dysphagia, shallow rapid respirations or slow respirations, cyanosis, pulse slow and irregular, forceful vomiting, bruit heard over the occipital region, blood tinged cisternal fluid. With complete block there is a positive Queckenstedt sign."

With a partial or ball valve type of block he reports a reverse of the Queckenstedt sign, viz.: "On compression of either jugular vein a drop in pressure reading instead of a normal rise, with a slow return to the initial reading, or a slight fall from the initial pressure on combined bilateral pressure with a delayed rise after the release of the jugular compression to a higher reading than the original reading."

In the above case I did not completely realize the dehydration present. A clysis of normal saline ought to have preceded both treatments and the period of drainage following the completion of the hypotonic solution ought not to have been allowed. Bennett advises intravenous injections of hypertonic solution for the treatment of cerebellar herniation. He reported edema of the brain at autopsy following the use of hypotonic solution in cases of suppurative meningitis with cerebellar herniation. He attributes the edema to the use of forced hypotonic solution.

I believe that this explanation of the edema of the brain, in the above case, is caused by the interference with the free drainage of fluid through the subarachnoid channels at the point of compression at the foramen magnum, being influenced, moreover, by the action of the forced hypotonic solution. In six autopsied cases of septic meningitis in my series, treated by the injection of hypotonic solution and by forced drainage, no unusual gross or microscopic hydrosis was found.

I have been concerned with the development of the procedure in forced drainage which will give the optimum result and at the same time insure the safety and comfort of the patient. In early work with this method the treatments which I gave, and which are recorded in the literature,

2. We have been able to perfect a technic such that we can do forced perivascular drainage on *Macacus rhesus* monkeys weighing from five to ten pounds. It is a most gratifying experience to find that we can carry out this procedure with ease and precision.

3. At the beginning of our experiments we inoculated all of our monkeys, both treated and controls, by the intranasal instillation method, using virus obtained from Dr. Simon Flexner (Rockefeller Institute) and Dr. Maurice Brodie (Department of Health Laboratory, New York City). This method was used because it was felt that it simulated the mode of human infection as closely as possible. We found that this dosage overwhelmed the animals and that the disease produced was so vicious and acute that it would be questionable if any method of treatment could be of value. The intracerebral method was then tried—using small doses of virus—very close to the minimal infective dose. In these

groups of animals we have obtained some evidence that forced perivascular drainage may prolong the period between onset of the disease and the onset of marked paralysis and prostration. It is too early to make definite statements, for the sections on these animals have not been completely studied. It can be said, however, that utilizing the knowledge which has been obtained to date, one should be able to give this method of treatment a fairer trial concerning its effect upon the experimental disease in monkeys.

4. The work with animals has taught many things concerning the strength of the salt solution, optimum period of injection and drainage, blood volume, and so on. We feel certain that these factors need further study before the best technic of forced perivascular drainage in the human can be devised.

One should be very cautious in drawing either negative or positive conclusions concerning the value of this treatment at the present.

LABORATORY AIDS IN THE DIAGNOSIS AND MANAGEMENT OF PNEUMONIA

Although the actual diagnosis of pneumonia is made largely on the basis of clinical and x-ray evidence, the laboratory can supply information of great value in treatment, prognosis, and detection of complications. Treatment based on bacteriological findings reduces the mortality from pneumonia caused by pneumococcus type I and, according to some reports, from that caused by types II and VII. (Antipneumococcus serum, type I, is available upon application to the local supply stations or the Division of Laboratories and Research.)

To be effective in pneumonia the serum must be administered early. The earlier the treatment, the greater the reduction in mortality. The determination of the type of pneumococcus inducing the infection is usually made from the sputum, sometimes from a blood culture, and occasionally from the urine.

Laboratory Aids in Diagnosis—I. Sputum for Pneumococcus Typing. Freshly expectorated sputum in a sterile container should be sent to the laboratory at the earliest possible moment. Specimens consisting mainly of saliva are unsatisfactory. The specimen—bloody, blood-stained, or purulent—should be from the deeper respiratory passages. In cases of lobar pneumonia the laboratory will usually be able to report within 24 hours the type of pneumococcus causing the infection. Pertinent data may at times be available within an hour. When the pneumonia is due to some pathogenic microorganism other than the pneumococcus, a cultural examination of fresh sputum will usually reveal the etiological agent. If, as often happens with children, the patient is coughing up no sputum, a specimen for typing may be obtained by holding a swab in the pharynx while the patient coughs.

II. Blood Cultures. A blood culture is

frequently helpful in determining the type of pneumococcus present and thus making possible early administration of serum. It is particularly useful when sputum cannot be obtained. Furthermore, a blood culture can aid in making a prognosis. The chances of recovery from pneumonia without bacteremia are, on the average, about three times greater than when bacteremia is present. Helpful information may also be secured from a blood culture when endocarditis or some other septic complication is suspected.

III. Urine Specimens. Occasionally a precipitation reaction, type specific and of definite prognostic value, may be obtained with urine.

IV. Total White Blood Cell and Differential Counts. A blood count early in the disease will often give information which helps in a diagnostic differentiation between pneumonia and a less severe respiratory infection. When no x-ray of the lung fields is available, it is especially important. A high total white cell count and an increase in the percentage of polymorphonuclear leukocytes are often present before signs of extensive consolidation can be detected by physical examination. A leukocyte count is particularly valuable when the percentage of immature polymorphonuclear leukocytes is recorded. Although the correlation between a low total white cell count and a poor prognosis is not strict, the absence of leukocytosis in a frank lobar pneumonia is an unfavorable prognostic sign. An increasing total white count or a rising percentage of polymorphonuclear leukocytes at the time that defervescence is to be expected, suggests the presence of a complication such as empyema, otitis media, endocarditis, meningitis—(Issued by the New York State Association of Public Health Laboratories, January, 1935, Leaflet No. 5.)

BETWEEN MENTAL HEALTH AND MENTAL DISEASE*

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In mental ailments transition cases are more evident than in somatic diseases. And because these individuals are frequently looked upon as "normal" people, they seem to me to be of greater importance than slight cases of physical illness.

A headache, a passing attack of indigestion, a "cold," a temporary lumbago, an endurable degree of constipation, a superficial wound, a nosebleed, a small boil, a vague feeling of discomfort are already sicknesses in themselves or symptoms of some disease.

It is not the same, however, with a large number of cases of persons who are mentally ill adjusted to their environment.

But just where does mental disease begin?

The excited manic is mentally ill, but a person who is temporarily angry and violent cannot be called abnormal. At times one is sad and depressed, but that does not put one in the class of persons afflicted with melancholia. Many people are less sociable than the average, more shy and retiring, but that does not mean that they are schizophrenics in a pathological sense. Others are extremely careful and conscientious about their daily duties and about insignificant details, looking more than once, perhaps, to see if they have locked the door, but this mental state should by no means be confused with "*folie du doute*." We may be temporarily mistaken and think that some friend has made fun of us, but this is far removed from the conviction of the unfortunate victim of paranoia. Anyone may believe he is hearing imaginary sounds, but is this to be compared with hallucinatory whispers? And lastly, one can pay too much attention to one's body, exaggerate one's true symptoms and think oneself ill when this is not the case—without being a psychoneurotic—provided one realizes one's error and corrects it.

But let us go a step further and we shall meet maladjusted persons whom the public looks at askance—and with good reason. These are persons who are no longer perfectly balanced but who are not yet really

mentally ill. People who are odd or eccentric in its bad sense, "queer" people, those who are embarrassed and excessively shy or who avoid the company of others or are extremely self-conscious, those who are given to melancholy or chronic irascibility, the true "*malades imaginaires*"—these people are all afflicted with the beginning of the transition from a normal to an abnormal condition. And yet they still function in every day life. Frequently they still perform their work and discharge their duties fairly well, although if placed in unfavorable surroundings or influenced by unfortunate incidents they will be plunged into the vast depths of psychopathic ailments. This is the class of diseases called "intangible" or, by others, functional.

It is well known that between mental health and mental disease there is often no fundamental difference but only a difference of degree. That is why we encounter phases in which cases of mild insanity are difficult to recognize, especially for the general practitioner to whom they first come and who generally dismisses them with the diagnosis "that's nothing," and the advice to "control themselves," "change their behavior," and so on. This happens especially in the immense field of the neuroses and psychoneuroses when the condition is not far enough advanced to be easily detected.

But at the same time a large number of these *transition cases*, provided we have the good fortune to discover them early and the physician has had the necessary experience, are more or less curable or, to be more exact, the patients can be readjusted to their environment. Prevention that may check further progress toward insanity is therefore often possible which is a cogent reason why I regard them as very important.

Psychiatry proper includes these cases also. It is true, but quite often ignores them because they are less interesting than the difficult, serious cases and less spectacular than the fully developed ones.

It is here that we see both the difference and the similarity between psychiatry

* Translated from the French

proper and mental hygiene. The treatment of the transition cases often does not yet constitute a therapy in the true sense of the word. Hospitalization is not necessary and may be harmful. Furthermore, mental hygiene, very nearly the same as general hygiene, while concerning itself with the life of the normal or quasi-normal man and teaching him and his immediate family how to live so as to avoid illness or check it in time, faces and also studies the causes arising from his upbringing and his industrial, social and economic situation which play their part in the etiology of the disease.

One can judge from this how necessary it is to understand these transition cases and what immense good one could do by treating them properly.

Let us illustrate the foregoing by examples taken from two sources—my private practice and practice in a mental hygiene clinic in a large city. There follows a description of 18 typical cases; unnecessary details are omitted.

1. A man of 38, with a wife and children, without being asked, relates his anamnesis from early childhood. His parents were indifferent to him and his father even persecuted him. That gave him the idea that he was good for nothing and in consequence he became very timid and remained so for the rest of his life. Masturbated up to the age of 22. During the war he was in the navy and was ill-treated by his superiors. He went through much suffering and his life was several times in danger. Once the ship to which he was assigned was destroyed by a submarine and he was rescued with great difficulty. He complains of indigestion and believes himself to be very ill. He has peculiar notions about health in general and especially concerning food and has undergone several kinds of treatment by all sorts of non-medical healers. He believes himself "lacking ambition" and "unsociable." He complains of insomnia and constant weariness. He is always thinking of his health, is afraid of illness and especially of cancer. He is of superior intelligence, though an unattractive personality. He is physically weak—13 kilograms under his normal weight. His wife, a pleasant, reasonable woman, when interviewed alone, admits that she does not love her husband, that he is "terribly fussy and tiresome," which means that she hates him but puts up with him, submits to his moods

and has no intention of leaving him. There is a condition of slight *psychoneurosis*, schizophrenic traits, inferiority complex, general asthenia. Of late this has prevented him from working and earning his living, although he puts on a fairly normal appearance before everyone but his wife, to whom he shows his true character. A long course of conventional psychoanalytic treatment by a famous specialist produced no results.

A complete examination and a series of talks in which his condition was explained and the truth revealed to him, restored his self-confidence, corrected his ideas about diet and led him to eat so as to put on weight. Regulation of his physical hygiene permitted him to sleep better. Some directions were given to the wife also.

He went back to work and, although not cured, has for several years been well enough for his needs and those of his family. No relapse. If some unfortunate development in his life should bring a return of his former mental condition, a fresh series of psychotherapeutic treatments would probably have a good effect.

2. This patient is a man 27 years old and complains of pains in the left side of the thorax, being convinced that his heart is affected. Physical examination was negative. Patient does not drink or smoke. He has been "unable to work" for a year and a half. He is even afraid to be alone or to go out unaccompanied; is sure that he could not walk far because his heart "would not allow it." And as in all such cases, if he imagines that he cannot walk, he is unable to walk. He adds, "I can't prove it to you—it's a disease that doesn't show." What chiefly prevents him from going out is his fear of fainting, for he fainted in a train a year and a half before. His fiancée explains that that was the only time that it happened and that he was unusually tired after an extraordinary long and difficult piece of work.

They have been engaged for three years and both say they love each other, although it is my impression that the girl is rather tired of the young man's company. It is more than likely that the purpose of his subconscious belief that he is ill may be to keep his fiancée attached to him, as she feels a sort of obligation to take care of him.

Like the first case, he is also, of course, a psychoneurotic. "You are my last resort," he said to me.

I succeeded in winning his confidence, assured him that his heart was perfectly sound, proved to him that he was able to do much work and even to walk without fainting and showed him the connection between his fears and his relation to his fiancée. Then, after a cautious attempt, he began to work. He followed my advice and now is well again.

Other doctors had told him the same thing, but in a superficial and off hand manner which failed to carry conviction.

3. This patient is a man of 40, with a hypospadias a few millimeters from the normal position of the meatus. He has an inferiority complex. He has never dared to have sexual intercourse. Whenever a young girl tried to become better acquainted with him, he would draw away from her and break off the friendship, through fear of his "anomaly." He is very timid and avoids meeting people, although able to carry on his work and be a useful member of his family (father, mother, brothers, and sisters). He considers himself unfortunate and his behavior and state of mind prove it.

A few explanations cured him—or, rather, corrected his mistaken idea, he married, and the first fruit of this marriage was positive proof for him that he was not abnormal.

4. A sterile woman came for aid primarily because she wished to have children, but it soon became clear that the real problem lay in another direction. She was mentally normal but unstable and ill adjusted to her surroundings. She accused her husband of infidelity in which she was fully justified, although it was easy to see that she would have liked to follow his example. She was quarrelsome and got into all kinds of unpleasant situations, e.g., on the day in which she came the first time to see me she managed to pick a quarrel with her 80-year-old father, who lives with another daughter.

Watching her movements, which is a sort of infallible analysis, I was easily able to see that she had unsatisfied sexual desires. She constantly leaned toward the examiner, touched his hand or his arm and bestowed on him her most engaging smile. Another physician, younger, came into the clinic; as he left, she could not help exclaiming, "What a good-looking man!"

After two or three weeks she began to steady down. She came to realize that she had no one but her husband who would put

up with her whims, provided she forgave his wrong doing, and that it was better to take him as he was. She ceased spying on him. The situation improved. She became more philosophical, so to speak, and less nervous and unhappy. He, too, finding her more friendly, felt more drawn toward her and the problem came nearer to its solution.

5. A girl of 24, recently arrived from England, where, after a year's friendship, and against the advice of her parents, broke with a young man she did not love and started out to make her way in the New World. Although she had no acquaintances over here, she succeeded in finding work in a hair-dressing establishment, where she worked long hours, spending the lonely evenings after work without friends or entertainment. A disagreeable symptom soon appeared and became more and more persistent—a twitching of the head and neck which went on for months. Because she was ashamed of this peculiarity, she quit her work.

There was no diseased condition—as yet. Her physical health was good. Mentally she could discover merely a sadness due to her defect. And her tic was obviously an unconscious but compulsory and necessary act which freed her from the work she detested. A single interview, in the course of which the mechanism that accounted for her twitching was explained to her, was sufficient to help her get rid of it. If it came back at all, as it did infrequently and mildly, it lasted only a short time and soon disappeared completely.

6. A very young man, an excellent university student, of superior intelligence, came in from the country to talk with me about his scientific and philosophical ideas, which he believed to be new and original. He expressed himself in perfect language, expounding his theories with admirable lucidity. There was unquestionably not the slightest element of psychosis. The interview was a pleasure to me as well as to him. When I demonstrated to him that several of his ideas in physics, chemistry, sociology, and philosophy had been known for a long time, he thanked me and asked me to suggest to him sources of information.

Several days after his departure, however, I received a letter from one of his friends from which I quote the important passages as follows:

You have interviewed Mr. X, interested in

proper and mental hygiene. The treatment of the transition cases often does not yet constitute a therapy in the true sense of the word. Hospitalization is not necessary and may be harmful. Furthermore, mental hygiene, very nearly the same as general hygiene, while concerning itself with the life of the normal or quasi-normal man and teaching him and his immediate family how to live so as to avoid illness or check it in time, faces and also studies the causes arising from his upbringing and his industrial, social and economic situation which play their part in the etiology of the disease.

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not love him. She really feels indifferent toward both of them.

Her greatest secret is her intimate life in early girlhood—her sexual relations with her brother, a few years her senior. This began when she was 8 years old and continued up till her marriage at the age of 21. From 16 to 21 she used to go with young men without having sexual intercourse with them but during all that time she was copulating with her brother once a week on the average. After her marriage she ceased all relations with him.

A second brother, also older than she but younger than the other, took advantage of her in the same manner now and then but not often. The other members of the family, whom I talked with, did not seem to know anything about these relations between the young girl and her brothers. The parents knew nothing at all about it.

There is a third brother but he is some twenty years older than his sister and left the parental roof early to set up his own home. This brother without knowing it, also played a part in the woman's mental life. When he went off with his sweetheart without going through a civil or religious ceremony, the parents were terribly shocked and pruned—although he has led and leads the most moral life of the entire group, having always been true to his wife and never committed incest. The patient, who was a mere child of eight at the time, made a vow, without anyone asking her to do it, that she would always be good and obedient and never do what her eldest brother was accused of having done. In order to obey these rules of conduct, she imposed punishments on herself, as, e.g., repeating this or that prayer so and so many times. This, it seems, was the beginning of the compulsion from which she still suffers. She was even convinced that the death of her grandmother who had been slowly dying for some time, occurred on the day when she forgot her obligation to say her prayers. Consequently, she felt guilty of her grandmother's death. Her brother's going away with his sweetheart excited the young sister's imagination to such a point that she yielded to the advances of her sixteen-year old brother.

The latter, who has had the largest share in this woman's incestuous life, likewise married but is now divorced. He sees his sister very seldom, as he manages to stay as far away from New York as possible. She claims that he no longer holds any at-

traction for her, although she admits she had once really loved him. Knowing that incest is regarded as a great sin from every point of view, she has always felt guilty, which is doubtless one of the principal causes of her mental abnormality.

The remarkable thing, however, is that this situation—a sense of great guilt, incest, compulsion, enslavement to a detested husband, inability to adapt herself to another man—has lasted so long without deranging the woman's mind more than it has. For, on the whole, she lives on fairly good terms with her immediate family, fulfills her duties without rebelling even if without satisfaction, raises her children as well as the average mother, makes an effort and succeeds in being a good wife. She is even fairly sociable, without being happy, in the midst of the groups she is thrown with in her home and elsewhere. She has a woman friend, a married woman, whom she visits often and who is the only person to whom she confides her secrets. It is not a case of direct homosexuality, but the fact that this patient, so unresponsive toward others, is capable of this close relationship and feels this need of friendship indicates the tendency and direction of this friendship.

It is precisely the fact that this woman who, theoretically, ought to be seriously ill, has instinctively found a way to adjust herself sufficiently and in reality is only a transition case which makes it possible for us to take her case and treat her.

To disentangle the details of this case, only the essential features of which I have related, has been abundantly worth the effort. This work helped me persuade the woman that in spite of her symptoms she was fairly well adjusted to her environment and had little to complain of. It was not possible to persuade her to pay no attention to her compulsion but I did succeed in convincing her that she and her brother were not the only incestuous persons, in fact that incest was fairly widespread.

As is known in such cases the doctor cannot assume the rôle of preacher or moralist, but must do all he can to heal or prevent disease. This, up to a certain point, was successfully accomplished in the case.

9 The patient is a young man, who, just coming out of a maladjusted adolescence, is fairly intelligent, with schizoid tendencies, subject to restless nights, and "shak-

philosophy. Because of his modesty, I believe, the talk was purely impersonal, but I ought to inform you of what he himself did not tell you. He has always been a good student, full of originality. He frequently embarrassed his professors with his difficult questions, and he made a deep impression on the students also. But several of them became jealous and he was reported to the dean of the university as a dangerous atheist and revolutionist. False rumors began to circulate about him—he never took a bath, slept in his clothes and, what was worse, did not drink, was not interested in football, and had never been seen in the society of young women. It was inferred from this that he must be crazy. The first two charges are completely false; if the others are true there is nothing humiliating about them. I am the only person in college who fully understands him.

At first he paid no attention to students' gibes, but of late he has been asking himself whether all these people are entirely mistaken in their idea that he is not right in his mind. That is why I sent him to you. I wished to get your opinion on his mental condition and I wanted you to reassure him if he was all right. But I see that his love of ideas got the best of him and made him forget the real object of his visit to you. He tells me that you did, indeed, say that there must have been some other purpose in his coming than merely that general conversation. And yet he changed the subject and continued the discussion, which he found most enjoyable.

So there we had a young man in good mental health but who, misunderstood by his environment, was being gradually forced to believe that perhaps the crowd was right and he might be mentally unbalanced. Treated by correspondence, he regained his self-confidence sufficiently to continue to hold fast to his convictions. Of course, one of the best means would have been to get him to leave college, or go to some other college, but in his case this advice could not be followed.

7. A boy of 14, splendid physique, and until recently a good scholar, now, though in high school, is falling behind and takes little interest in his studies; is apathetic and answers questions laconically.

His aunt, who came with him told that one day the boy had tried to kill himself by turning on the gas.

He accounts for his state of mind by reason of the treatment he gets at the hands of his grandmother. His mother died from complications owing to heart disease. His brother, younger than he, and the father live with the latter's mother, a very old woman. The other boy seems to be easier to get along with and never worries over anything. But the older one, much more sensitive, hates his grandmother, who is very stern.

"We never have any peace at home," he

says. "Grandma is always yelling at us and scolding us. She finds fault with everything. I can't study my lessons."

"The house is dirty," the aunt adds, "and the food is bad. When I come and try to clean up the house, she won't let me do it. She claims she can do it all herself."

Such a hostile atmosphere is a great misfortune for the young boy.

I sent for the father, a factory hand who did not understand the situation at all, and explained to him what was going on. A change of surroundings produced the desired result and the patient regained his normal condition before it was too late.

8. A woman of 32, mother of several children, suffered since childhood from a compulsion that she must make certain motions a certain number of times, e.g., touch a chair before she sits on it, do something to the dishes before she washes them, turn over the pages backward just so many times while reading a book—once for each member of her family. If she resists this tendency, her work is less well done or not completed. For example, she stops reading the book, washing the dishes.

Intelligent, self-taught, she has read much, including books on psychology—which in this case is not so good. She expresses herself easily.

She has been under treatment in many places—among others, according to her, she underwent for two years the classical psychoanalysis in one of the largest hospitals of New York but without any change.

She is tall, organically sound, and what is usually called pretty. Her married life is not happy, although outwardly she lives peacefully with her husband and children. As she herself says, "It is my fault." She claims she loves her children, but "not fiercely like other mothers."

Her face looks strained and depressed and only now and then shows a faint suggestion of a smile.

Several times she has made up her mind to leave her husband but she does not do it, since she lacks the courage. She would like to get a job as stenographer, her occupation before marriage, which she believes would make her independent economically—and sexually also. Not being married, she could do as she pleased. She would not be concerned as to what might become of her children, knowing that her husband would take care of them. She is having sex relations with another man, but does

not love him. She really feels indifferent toward both of them.

Her greatest secret is her intimate life in early girlhood—her sexual relations with her brother, a few years her senior. This began when she was 8 years old and continued up till her marriage at the age of 21. From 16 to 21 she used to go with young men without having sexual intercourse with them but during all that time she was copulating with her brother once a week on the average. After her marriage she ceased all relations with him.

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The latter, who has had the largest share in this woman's incestuous life, likewise married but is now divorced. He sees his sister very seldom, as he manages to stay as far away from New York as possible. She claims that he no longer holds any at-

traction for her, although she admits she had once really loved him. Knowing that incest is regarded as a great sin from every point of view, she has always felt guilty, which is doubtless one of the principal causes of her mental abnormality.

The remarkable thing, however, is that this situation—a sense of great guilt, incest, compulsion, enslavement to a detested husband, inability to adapt herself to another man—has lasted so long without deranging the woman's mind more than it has. For, on the whole, she lives on fairly good terms with her immediate family, fulfills her duties without rebelling even if without satisfaction, raises her children as well as the average mother, makes an effort and succeeds in being a good wife. She is even fairly sociable, without being happy, in the midst of the groups she is thrown with in her home and elsewhere. She has a woman friend, a married woman, whom she visits often and who is the only person to whom she confides her secrets. It is not a case of direct homosexuality, but the fact that this patient, so unresponsive toward others, is capable of this close relationship and feels this need of friendship indicates the tendency and direction of this friendship.

It is precisely the fact that this woman who, theoretically, ought to be seriously ill, has instinctively found a way to adjust herself sufficiently and in reality is only a transition case which makes it possible for us to take her case and treat her.

To disentangle the details of this case, only the essential features of which I have related, has been abundantly worth the effort. This work helped me persuade the woman that in spite of her symptoms she was fairly well adjusted to her environment and had little to complain of. It was not possible to persuade her to pay no attention to her compulsion but I did succeed in convincing her that she and her brother were not the only incestuous persons, in fact that incest was fairly widespread.

As is known in such cases the doctor cannot assume the rôle of preacher or moralist, but must do all he can to heal or prevent disease. This, up to a certain point, was successfully accomplished in the case.

9. The patient is a young man, who, just coming out of a maladjusted adolescence, is fairly intelligent, with schizoid tendencies, subject to restless nights, and "shak-

ing in the legs." He complained of sexual impotence, premature ejaculation, nocturnal emissions, pollutions in the daytime when merely thinking of a woman, irritability, and "fear of insanity." He was convinced that all this came from masturbation which he had been indulging in for several years.

In this case, the assurance that his onanism, as he described it, hurt no one and left no consequences, changed him completely. After a few talks, he ceased to be preoccupied with the sexual problems he had created for himself, found a young girl suited to himself, and got a job.

10. A man of 30 who suffered merely from an inferiority complex declared that he was "very nervous and sexually undeveloped." He was found to be anatomically normal. The family situation kept him in a state of mind which it appeared he would never be able to get out of without assistance. At the age of two he was left fatherless; his mother, as in nearly all such cases, shielded him excessively, so that now he was still drawn toward her and unable to find any woman to take her place. His older brother, moved by unconscious jealousy and under the pretext of his responsibility as substitute for the father, raised him as strictly as the mother's vigilance permitted. After I had brought these details to light and had explained the cause of the trouble to the young man (and also to his mother, who still spoils him), he succeeded in changing his way of living and his ideas. He is now married and successfully adjusted to his new environment.

11. This patient is a lad of twenty with schizoid tendencies. He was well "up to a few months ago." He fell in love with a young lady whose mother looked down on him, so that he had to give her up. He tried to drown his sorrow by getting drunk with his friends and neglecting his work. These friends hailing from a section where his mother, a widow, sells newspapers and where the proportion of criminals is above the average, are always armed and frequently resort to fists and revolvers. Later, he thought he might remedy the situation by enlisting in the National Guard, which obliged him to go to the armory one or two days a week. But he could not submit to military discipline and was on the point of deserting and probably bringing down on himself a term of imprisonment when the intervention of a physician induced the military

authorities to consent to his release from obligations. Wanting to leave the city to try his luck out West, he caused a scandal in the family by demanding that his mother give him money which she did not have. Obsessed with ideas of persecution and with the fear of insanity, detesting his mother, who, he said, was always "lecturing him and making a scene," he applied to our clinic. We do not claim to have cured him but, by listening to him and talking with him and his family, we succeeded in bringing back the *status quo ante* and getting him to take a job and give up his dangerous friends.

12 and 13. The two following cases, which at first glance are alike in many respects, seem to illustrate very aptly the difficulty of a differential diagnosis in certain cases of depression and dementia praecox. Two unmarried young men of the same age and very nearly the same line of work both happened to come to the clinic on the same day. Both avoided meeting people, but for different reasons. They feared imaginary dangers and had no desire to live. Neither of them had well-developed hallucinations but were disturbed by vague, incomprehensible noises.

Nevertheless the difference is great. Whereas one was afraid of sickness, the other was obsessed—or believed he was—with the desire and yet the inability to talk with people, especially young women.

The hypochondriac felt his own pulse several times a day. He was in good physical health, ate and slept well, did not remember having any disagreeable dreams, never had an emotional upset, and showed no unfavorable antecedents in his family. He did not go to the theatre or out walking, did not dance, was not interested in women, did not belong to any social group. Notwithstanding the great heat of a torrid summer day, he over-dressed, because he feared catching cold, especially since he was "not strong." He had been told five years ago that he had a heart murmur and he felt that his heart "skips a beat now and then." His expression was very apathetic and he looked at the ground as he talked to one.

The other young man, on the contrary, was rather wide awake and made an effort to understand. When this schizophrenic found himself in the presence of a young woman, he liked to talk with her but did not know what to say. He merely stared at her feet—her shoes, he said—then her

stockings, and did not go any higher than her knees, and he was silent. And yet he admired the fair sex. "Women are lovely and wonderful," he said. He had some young women friends but stayed away from them for fear of doing or saying "some irresponsible thing." He had no sense of inferiority as did the first young man; he felt rather superior to his environment. He has an aunt who is in an insane asylum and his mother, after some "trouble" with her second husband (not the patient's father) spent a few months in a psychopathic hospital. The young man has had an unfortunate childhood. He has never known his father and had never seen anything but quarrels started by his mother until he was put in an orphan house, where he was badly treated, according to his statement. At the age of eight he had an accident—a fracture of the bones of a forearm.

Both men had graduated from public school at 15, the usual age.

Fortunately both were able to throw off their abnormal condition—the former his listlessness, his preoccupation with his health; the latter, the spell which shut him off from the world. Psychotherapy has had its effect.

One may feel some doubt concerning cases of melancholia, but in the first of these cases I was afraid of the consequences and, on the other hand, although in the past dementia praecox cases were given up as incurable, we know now that they can be cured or greatly benefited if taken in hand early enough. That is why I had more hope for the second patient than for the first.

14, 15, and 16. A wife is unhappy and depressed because her husband is out of work and therefore unable to make a living and support his children, the family being dependent on the help of an aunt.

A man had always hoped to become a lawyer and went through law school evening course without difficulty but failed repeatedly to pass the New York bar examinations. He was a clerk in a store and is becoming melancholic. Believes himself inferior to the rank he had hoped to attain but above his present job. Was badly treated in childhood by a cruel father.

A divorced woman who was supporting her children and bringing them up single-handed suddenly lost her entire fortune, \$5,000, in a business venture. Since then

she had been expecting to lose her mind and wanted to commit suicide. She had no hallucinations but dreamed about people coming to take her away by force—a fulfillment of subconscious desires.

These three cases are now cured. In the first instance, where there had as yet been no illness at all, reasoning with the woman and making the situation clear to her was enough. In the second, it was necessary to prove to the patient that he did not really wish to become a lawyer and that he would be better satisfied to remain at his present social level. A few talks with the third produced a remarkable result. The woman is now working as a dressmaker and earning her living.

17 and 18. The abnormal mental state or bad judgment of the parents can have harmful consequences for the children. In these two cases, which were quite as much problems in mental health as in child-rearing, it was the parents and not the children who ought to have been treated or properly brought up.

One mother was convinced that her four-year-old child was nervous, irritated, and ill. The most important symptom she could name was the fact that he moved a great deal during sleep. An examination showed him to be a fine little lad, playful and full of life, as was proper at that age. It was the mother—as one learned after a talk with her, and the father—who was mentally depressed and, believing herself to blame, was sure she had harmed her child and made him mentally unbalanced.

Another mother, who flattered herself that she had read—but ill digested—articles on psychology and modern child-raising, believed her child a grave problem, mentally defective, negative, and disobedient. It is true that the six-year-old boy was a little maladjusted to his environment, but if he had any defects, they were the defects of his good qualities. He had an alert intelligence, above the average (IQ:120), and was gifted with a poetic temperament which his mother was unable to understand. He drew well, talked about his little friends, and expressed himself perfectly.

It is difficult to state what kinds of cases we meet with, but the following data seem to me typical for our dispensary:

Out of 100 cases we have had 20 psychoneurotics and neurotics, 18 cases of melancholia or mental depression, 15 schizophrenics, 5 behavior problems (children), 6 cases of stammering (children),

8 epileptics with mental disturbances (3 of them children), 2 cases of insomnia of mental origin, one of headache of mental origin, 3 convulsive *tics* of mental origin, 7 hypophrenic children, one person sent to us by the court to certify as to his mental condition, 14 without any discernible mental defect.

In other words, 70 cases coming under the head of mental hygiene, with 50 per cent of them showing some improvement or other.

Perhaps the reader will ask what constitutes the psychotherapy for these transition cases. In the first place, as thorough a search as possible for the factors that caused the disturbance. Any source of information is valid for this purpose. One must try to learn about the patient's life from his very birth, also his heredity if possible. Family life, upbringing, influence of the school, factory, shop, church, social and economic background, sex life, poverty, and obstacles of all kinds.

Frequently the cure is accomplished in great part through the opportunity offered the patient to make a full confession, to talk about his case, which he sees much better when it is placed clearly before him. There is also the physical examination, which if it is negative or nearly so, circumscribes the disease and *re-establishes the patient's self-confidence*. *Somatic ailments may be the cause of or an opportunity for mental ailments, which latter may take on the appearance of bodily ills*. One must therefore pay attention to these possibilities.

The very act of talking with the patient and taking an interest in him is in some

cases a great help. But especially, the disclosing of the mental difficulties and untangling of a complicated situation may do a great deal of good. This treatment is not formal psychoanalysis but a *modified and simplified analysis*.

Psychiatrists who are trying to make use of suggestion—that is to say, to counteract autosuggestion—are sometimes adversely criticized, but I believe they should be free to use *all* psychic means available and apply them according to the particular case. This is why it is *impossible to give hard and fast rules for these conversations*.

Of course, medication is also frequently employed in certain instances temporarily, as in insomnia. Nor are the diet, hydrotherapy, and other physiotherapeutic means to be overlooked.

I address myself both to the general practitioner and to the specialist.

I wish to emphasize the great importance of these cases, where much harm may be done or great help may be afforded. They should never be misunderstood or neglected by the physician at large.

The first clinic, as far as I know, where this work has been in practice is that of Professor Toulouse of Paris, where I have followed it for some time. In this country the Outpatient Department of the New York State Psychiatric Institute should be mentioned in this regard, where I have recently worked and studied.

I would make a plea to attract the attention of the able specialist to use his great skill and experience in studying and treating these humble transition cases more than they have been in the past.

611 WEST 158TH STREET

DIPHTHERIA DISAPPEARING

Diphtheria is becoming one of the rarest of diseases, according to the New York State Department of Health, which makes public figures showing that in 1934 only 442 cases were reported to the department. In 1914 there were 5,408 reported cases outside of New York City, and in 1924 there were 5,883. Thus the number has been reduced in the past ten years by over 92 per cent.

The small number of cases, the department reports, is attributable mainly to immunization of young children against the disease, although, so far as is known, immunization does not prevent the diphtheria carrier state.

The department officials, as quoted in the *New York Times*, believe that "no sizable community is without diphtheria carriers, and

in the light of present knowledge there seems little or no possibility of controlling every source of diphtheria infection." In spite of the rarity of clinical cases, the department states that "vigilance cannot be relaxed."

"The protection of every child, particularly in densely populated communities, by means of artificial immunization during the first year of life is still the goal to be attained," the statement says.

Two cities, Binghamton and Niagara Falls, and each having more than 50,000 population, had no cases in 1934, "an event which, according to morbidity records extending back to 1908, has never occurred before in New York State." The percentage of children immunized was 40 and 43 per cent.

THE IMPORTANCE OF MEDICAL SUPERVISION DURING EARLY INFANCY ON THE INFANT DEATH RATE

HARRY BAKWIN, M.D., AND RUTH MORRIS BAKWIN, M.D.

From the Children's Medical Service of Bellevue Hospital and the Department of Pediatrics, New York University, and the Fifth Avenue Hospital, New York City

The purpose of these observations was to determine the effect of medical supervision on the growth and health of infants from a poverty environment.

Three groups of infants were studied.¹ One group consisted of infants admitted to Bellevue Hospital as healthy boarders or because of mild upper respiratory infections. The homes from which they were derived were, for the most part, very poor, the usual family income in 1929

partial or complete relief aid. The group is predominantly "North European" (Irish-American). These infants received no regular medical supervision before admission to the hospital. There were 534 infants measured 798 times.

The second group consisted of infants born in Bellevue Hospital and residing in its vicinity. They are, economically and racially, identical with the group just described, differing only in that they were

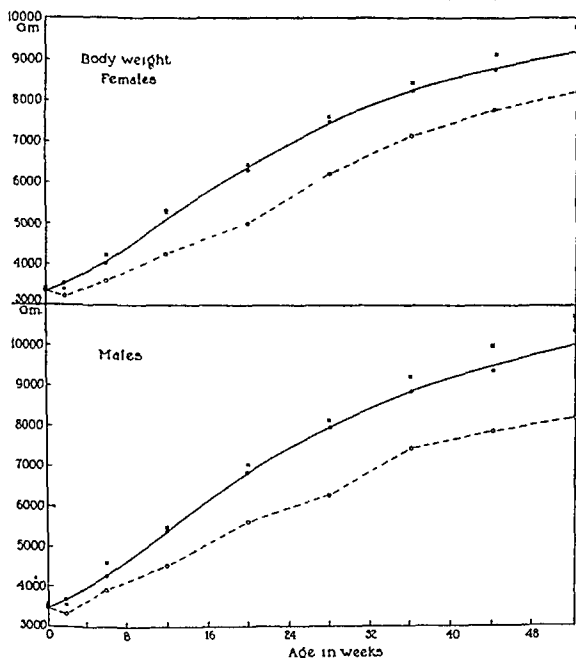


Chart 1. Comparison of the growth in weight of Bellevue Hospital supervised infants (continuous lines), unsupervised infants (dotted lines) and Fifth Avenue Hospital infants (averages represented by crosses)

being between \$15 and \$22 per week. Employment in this group has always been irregular, total unemployment for periods of weeks being common. In September, 1932, when this study was nearing completion most of the families were receiving

supervised throughout infancy in a special clinic. They were first seen at about 3 weeks of age and were observed thereafter at monthly and often at shorter intervals, particularly during the early weeks of life. Advice was given regarding diet, isolation

from infection, and general care. Breast feeding was encouraged. For artificial feeding, whole or evaporated milk, with added cane sugar, was used. Egg yolk was introduced in the third month of life, cereal and vegetable in the fourth month.

mately the same rate, the weight and height of the Bellevue Hospital group being only slightly below that of the Fifth Avenue Hospital group but still somewhat higher than the "normal" values given in most textbooks. There is a delay in the

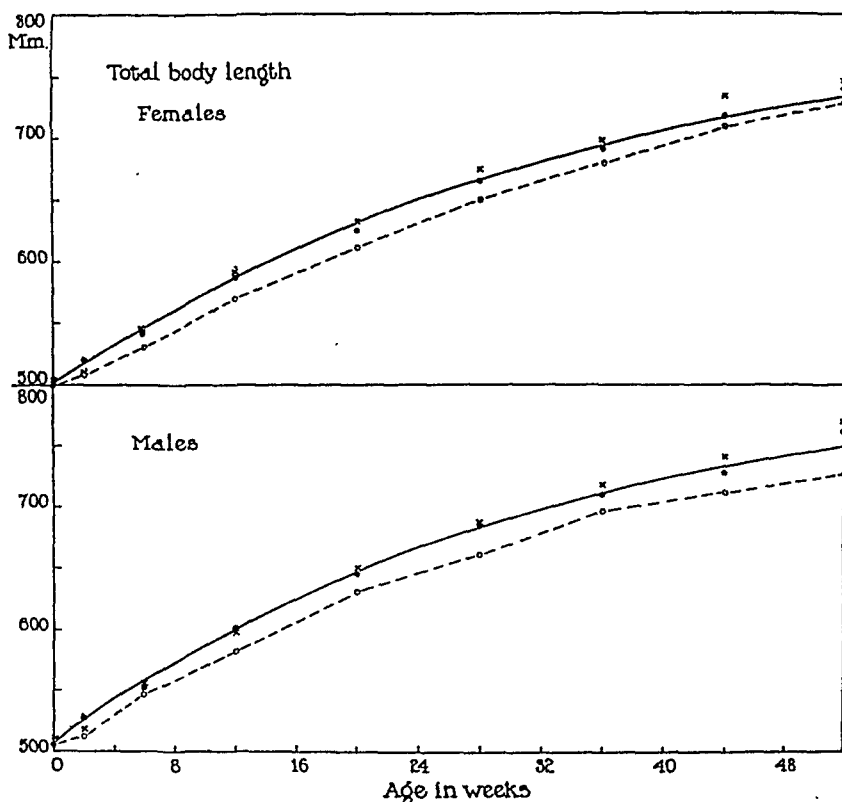


Chart 2. Comparison of the growth in height of Bellevue Hospital supervised infants (continuous lines), unsupervised infants (dotted lines) and Fifth Avenue Hospital infants (averages represented by crosses).

Orange juice and codliver oil were given routinely after the first month. No other antirachitic aside from sunlight was used. The average caloric intake was between 50 and 55 calories per pound. About 12 minutes per patient was allotted by the physician at each visit. There were 352 infants in this group measured 1,050 times.

The third group consisted of infants born at the Fifth Avenue Hospital and supervised there in a special clinic. The economic environment of this group was considerably better than that of the other groups, family incomes in 1929 averaging between \$30 and \$35 per week and employment being much steadier. The medical supervision was identical with that at Bellevue Hospital. There were 514 infants in this group measured 1,405 times.

The growth in weight and height of the 3 groups is compared in Charts I and II. The 2 supervised groups grow at approxi-

unsupervised group, however, which becomes apparent in the second 4 weeks of life. It is more marked during the 8 to 15 week period but thereafter growth in the 3 groups continues at the same rate, with the unsupervised group at a lower level. This is shown in Chart III which illustrates percentage growth rates for the 3 groups, calculated by the method of Brody² by 12-week periods. Changes in the growth of other external and internal body dimensions are published elsewhere.^{3, 4, 5}

In Chart IV the growth in total body length and weight of infants dying of various causes (267 cases) and surviving infants (Bellevue Hospital unsupervised) is compared. The infants who died were, on the average, shorter and weighed less than those who survived. Though weight may have been influenced by severe illness, it is hardly likely that total body length

could have been so influenced since death in infants is only rarely dependent on long standing illness.

One of the commonest causes of infant death in the Bellevue Hospital population is acute intestinal intoxication. In Chart

V, the total body length of infants with this condition (220 cases) is compared with that of the Bellevue Hospital unsupervised group. Infants with acute intestinal intoxication are, on the average, shorter than the control group. Weight comparisons in

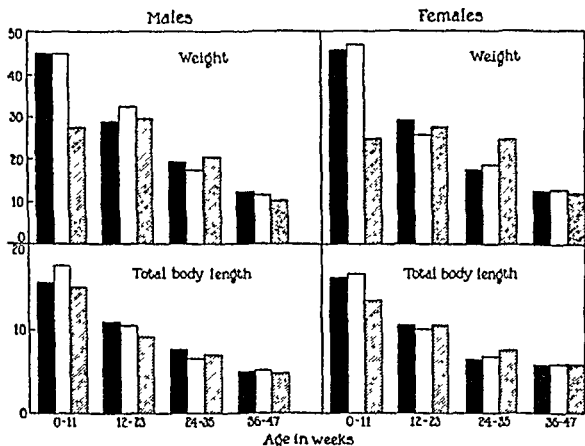


Chart 3. The percentage growth rates for various body dimensions by 12 week periods during the first 48 weeks of life. Solid columns represent the Fifth Avenue Hospital group, blank columns the Bellevue Hospital supervised group, and cross hatched columns the Bellevue Hospital unsupervised group.

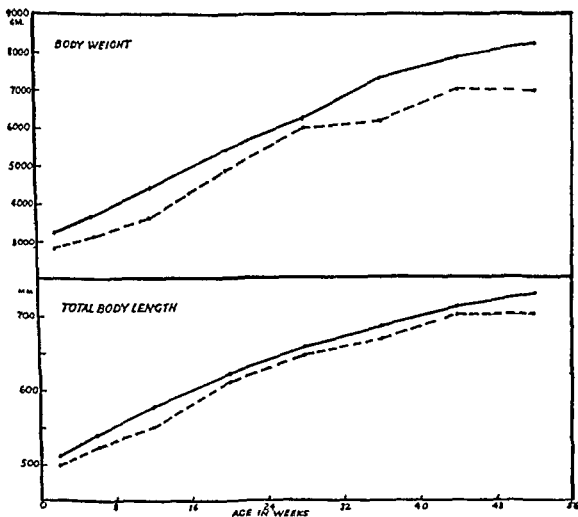


Chart 4. Comparison of the total body length and weight of healthy infants (continuous lines) and infants who died (dotted lines).

this disease are useless since the onset is accompanied by a marked weight loss. In Chart VI, however, the weights of 67 infants, measured before they developed acute intestinal intoxication are shown. It can readily be seen that it is the under-weight as well as the under-height infant who develops this condition.

It is evident from these observations that the crucial period for the prevention of severe illness and death in infancy is the early weeks of life. This period should be stressed, if necessary for reasons of economy, at the expense of supervision during the later months of the first year. With modern dietary régimes little change is necessary after 6 or 8 months and infants

properly supervised during the first half year can be seen safely at 2 instead of 1 monthly intervals during the second half year.

Summary

1. The growth of infants from a poverty environment may be raised to normal levels solely through the agency of medical supervision.

2. The delay in growth of unsupervised infants occurs almost entirely within the first 12 weeks of life, growth thereafter continuing at the same rate but at a lower level than in supervised infants.

3. Undergrown infants become seriously ill and die in higher proportion than infants who grow normally. 132 EAST 71ST STREET

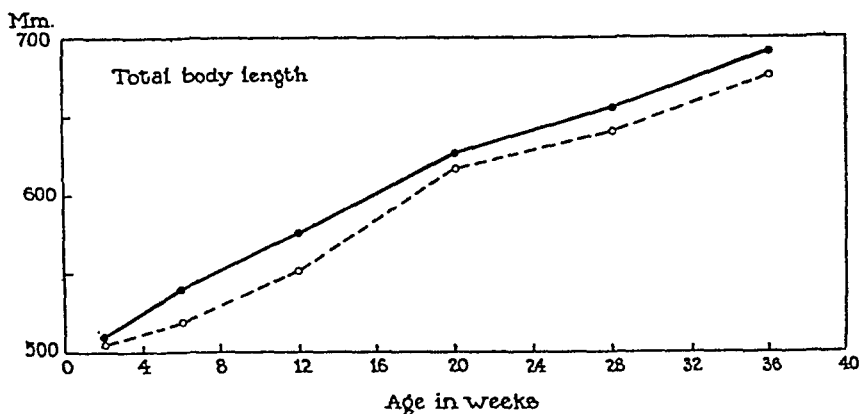


Chart 5. Comparison of the total body length of healthy infants (continuous lines) and infants with acute intestinal intoxication (dotted lines).

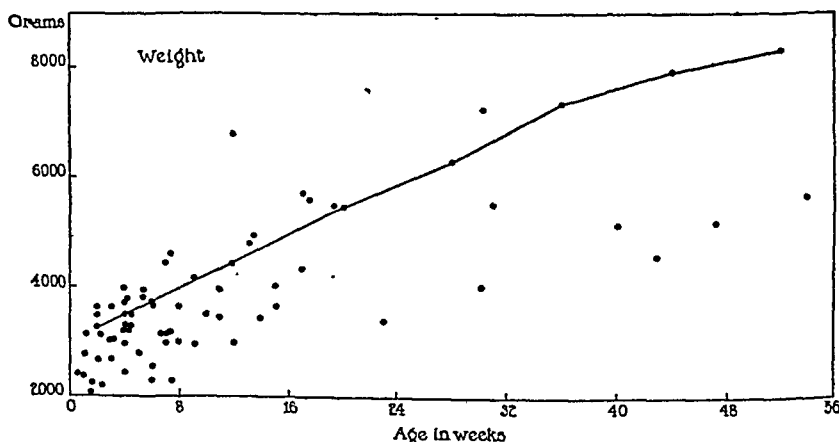


Chart 6. Comparison of the body weight of infants who developed acute intestinal intoxication at a later date and healthy infants. Circles represent individual cases.

References

1. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. II. The Proportions of the External Dimensions of the Healthy Infant During the First Year of Life, *J. Clin. Invest.* 10:377, 1931.
2. Brody, S.: Growth and Development. III. Growth Rates, Their Evaluation and Significance, University of Missouri, *College of Agriculture Research Bulletin*, 97, 1927.
3. Bakwin, H., Bakwin, R. M., and Milgram, L.: Body Build in Infants. IV. The Influence of Retarded Growth, *Am. J. Dis. Child.* 48:1030, 1934.
4. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. VII. The Effect of Retarded Growth on the Dimensions of the Cardiac Silhouette and the Thoraco-Abdominal Cavity. (To be published in the *Am. J. Dis. Child.*)
5. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. VIII. The Influence of Retarded Growth on the Dimensions of the Ulna and Radius. (To be published in the *Am. J. Dis. Child.*)

COMMUNITY CONTROL OF PROFESSIONAL BLOOD DONORS

E. H. L. CORWIN, PH.D.

Secretary and Treasurer of the Blood Transfusion Betterment Association of New York

Need of Community Control

In response to the increasing use of blood transfusions as an important therapeutic device came the need of safeguards in the use of it. None of the safeguards is more important than carefully made compatibility tests and the freedom of the donors from diseases which can be transmitted with the blood, such, for example, as syphilis or malaria. It is, of course, possible for each hospital to cultivate its own group of "donors," to examine them periodically, and to make with them suitable arrangements. No individual arrangement can, however, assure a given institution of a supply of donors of the rarer types, nor can a single institution regularize the employment of donors. These things are possible only when a number of institutions agree to employ donors through one avenue. It is with this in view that the Blood Transfusion Betterment Association was organized in New York.

Origin of the Blood Transfusion Betterment Association

The Blood Transfusion Betterment Association is an expansion of the work of the Co-operative Blood Donors Bureau originally established in New York Hospital by Dr. Arthur F. Coca in response to a demand by hospitals and physicians for donors who had been reliably examined and approved by means of tests. Up to that time only commercial agencies had been in existence and were outside of the pale of any control. A large proportion of their donors were too often recruited from the less responsible elements of the community, and were used without much consideration for any one concerned. In 1930, largely through the efforts of the Blood Transfusion Betterment Association and of the Committee on Public Health Relations of The New York Academy of Medicine, additions to the Sanitary Code were made, designed to correct this evil.

Organization

The Blood Transfusion Betterment Association was incorporated as a non-profit making organization. All of the hospitals

and doctors in the city can use the services and those paying annual dues of \$10 are eligible for membership in the Association.

The Association functions under the direction of a Board of Trustees which appoints annually a Board of Medical Control of eleven members to direct its medical activities. Five of the membership of this Board are ex-officio representatives of the New York Academy of Medicine, the New York Pathological Society, the Department of Health, the Department of Hospitals, and the five County Medical Societies of Greater New York. An executive Medical Director is appointed to be in immediate charge of the work.

Most of the members of the Medical Board are experts in either hematology or the practical aspects of blood transfusion. One of them is the leading authority on blood grouping, Karl Landsteiner, M.D., of the Rockefeller Institute, and Nobel Prize winner in medicine in 1930, whose work on blood grouping has played such an important part in the use of transfusion as a therapeutic practice. The invaluable advice and assistance of Dr. Landsteiner are always at the disposal of the Association. The laboratory and clinics are under the experienced guidance of Dr. Coca. Through the very able business direction of Mr. Henry C. Wright, the Manager of the Association, the financial status of the Bureau has improved to such an extent that during the past year it has been possible to pay the Medical Director a moderate salary for continuous service, and to undertake research work.

Aims and Purposes

From the beginning a comprehensive program was devised for the Blood Transfusion Betterment Association, with activities in many directions. In addition to supplying donors for the use of physicians and hospitals it was planned that the Association should sponsor important researches in the technic of transfusion and the indications for it, as well as postgraduate training in all aspects of the work.

As stated in the articles of incorporation of the Association its aims and purposes are as follows:

this disease are useless since the onset is accompanied by a marked weight loss. In Chart VI, however, the weights of 67 infants, measured before they developed acute intestinal intoxication are shown. It can readily be seen that it is the under-weight as well as the under-height infant who develops this condition.

It is evident from these observations that the crucial period for the prevention of severe illness and death in infancy is the early weeks of life. This period should be stressed, if necessary for reasons of economy, at the expense of supervision during the later months of the first year. With modern dietary régimes little change is necessary after 6 or 8 months and infants

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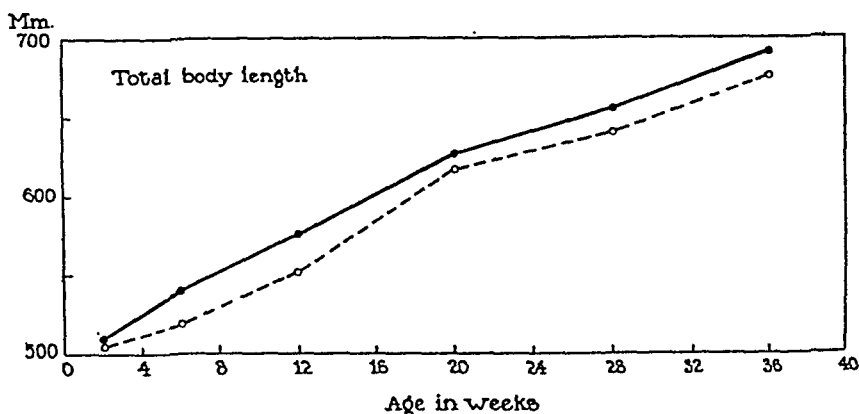


Chart 5. Comparison of the total body length of healthy infants (continuous lines) and infants with acute intestinal intoxication (dotted lines).

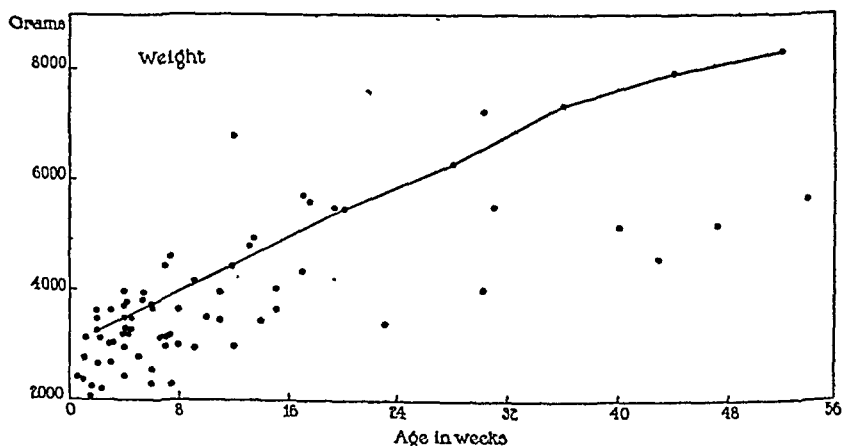


Chart 6. Comparison of the body weight of infants who developed acute intestinal intoxication at a later date and healthy infants. Circles represent individual cases.

References

1. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. II. The Proportions of the External Dimensions of the Healthy Infant During the First Year of Life, *J. Clin. Invest.* 10:377, 1931.

2. Brody, S.: Growth and Development. III. Growth Rates, Their Evaluation and Significance, University of Missouri, *College of Agriculture Research Bulletin*, 97, 1927.

3. Bakwin, H., Bakwin, R. M., and Milgram, L.: Body Build in Infants. IV. The Influence of Retarded

Growth, *Am. J. Dis. Child.* 48:1030, 1934.

4. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. VII. The Effect of Retarded Growth on the Dimensions of the Cardiac Silhouette and the Thoraco-Abdominal Cavity. (To be published in the *Am. J. Dis. Child.*)

5. Bakwin, H., and Bakwin, R. M.: Body Build in Infants. VIII. The Influence of Retarded Growth on the Dimensions of the Ulna and Radius. (To be published in the *Am. J. Dis. Child.*)

Academy of Medicine were instrumental in incorporating in the Sanitary Code Donors must carry their Department of Health passbook when responding to calls. If for any reason the applicant is rejected by the Department of Health he is not accepted for registration by the Bureau. Among the data recorded in this passbook is certain essential information for identification purposes, including the donor's photograph, his blood type, and the amount of blood taken at each transfusion.

Periodic Re-examination

A Wassermann test of every donor registered with the Association is made regularly at the Department of Health Laboratory every six months, and the date of the last examination is indicated in the donor's passbook as a certification that his test was negative at that time. The Association's laboratory further controls the donor by a Kahn test every six months, alternating with the Department of Health Wassermann examination. In effect, the donor thus receives a serum test for syphilitic infection every three months.

After a donor has submitted to a transfusion he must remain off the active list for one week for each 100 cc of blood given. Before he may be used again he is given a complete physical examination at the clinics of the Association maintained for this purpose. At that time a fresh hemoglobin reading is also made. The standard set by Dare is used and no donor is utilized whose hemoglobin is below the minimum of 85 per cent.

In the donor's Department of Health registration book is entered the record of the date of each examination, the percentage hemoglobin and other results of the examination under the signature of the examining physician.

There is also recorded in this passbook the date of each transfusion, where it was made, the amount of blood taken, the result of the routine examination of the donor, and the signature of the physician performing the transfusion.

Donors are supplied with a pamphlet of instructions to insure intelligent co-operation on their part in the mechanics of operating the service, and giving them simple information as to their habits and general health.

Every effort is made to safeguard not only the patient but also the donor—the latter particularly against too frequent

donation of blood, infection—or unnecessary cutting down on the veins.

How the Bureau Functions

As indicated in the foregoing description of the examination procedure of applicants for registration, prospective donors are first examined and classified as to blood type at the clinic of the Association. A record of the results of the examination and typing of each candidate is kept on file for ready reference.

A card index of the donors available and on the active list at any given time is kept within hand reach of the attendant on duty. The service is on a 24-hour basis, 365 days of the year. Almost nightly from one to several emergency calls are received at the office.

When a request for a donor is received at the office entries are made of the name of the patient, the name of the hospital, or of the private physician as the case may be, the type of donor needed, and the urgency of the call. Subsequently the hospital is given the name of the donor assigned and the approximate time of his arrival. Donors are sent by taxicab whenever the time element is especially important, and in all instances an effort is made to avoid unnecessary delay in transit by assigning a suitable donor from as near the vicinity of the hospital as possible.

On the receipt of a call the office attendant consults the card index and gets in touch by telephone with a donor who meets the requirements as to blood type and any other necessary qualifications.

Upon receiving the telephone message the donor proceeds at once to the hospital where he reports his presence to the proper office where his credentials are examined and the type checked to make certain that he meets the requirements.

Established Rates of Pay

Following the transfusion, the donor is expected to rest for one hour. After this he proceeds to the cashier's office of the hospital where he is paid for his services at the rate of \$7 per 100 cc of blood. The amount of blood withdrawn is entered in his passbook. This constitutes a voucher to the cashier as well as a guide to the Association, of the next availability of the particular donor. No donor is used again until as many weeks have elapsed since his last transfusion as hundreds of cubic centimeters of blood were withdrawn. In other

words, a donor from whom 500 c.c. was taken is not available until five weeks have elapsed since his last transfusion.

Conclusion

The recognition which the Blood Transfusion Betterment Association has received in New York, and the organization of services along similar lines in Paris, Brussels, London, Berlin, will, no doubt,

stimulate the adoption of similar community safety devices in all other large population centers. Each city of considerable size, together with its suburbs or satellite towns, can establish an organization similar in its essential service features to the Blood Transfusion Betterment Association of New York without great difficulty or cost.

2 EAST 103D STREET

SOME PLAIN TALK

A few "jolts to the jaw," in the language of the day, were given the advocates of health insurance in the presidential address of Dr. Michael Canick to the East New York Medical Society. He said in part:

"At no time in human history have the people gotten a better dollar's value in medicine than at the present, what with our improved diagnostic and therapeutic methods. There never was a time nor was there ever a trade or a profession where people obtained valuable service without pay, as in our profession at the present moment. Not only the indigent and collar classes but the chisler—in the bargain—is availing himself of this immense free service. They lie, therefore, who claim that certain classes of people obtain no medical service—especially in the city.

"Equally false is the statement, accompanied usually by crocodile tears on the part of the social workers, that the doctors are starving. I fervently declare that to be even a greater lie. The old timers will bear me out, when I say that 20 years ago it was considered successful to make rental the first year and cover your immediate needs by the end of the third year. The immediate needs were very modest; a two-room office, without elaborate equipment, without automobiles, and other comforts. The doctor worked ten times as hard and obtained less than one-quarter than at present, both relatively and absolutely. The cost of living was then half of what it is now but the income was less than one-quarter. The only income the doctor ever derived then, was from office visits at 50 cents and 25 cents per, outside calls at \$1 per, and confinement cases at from \$5 to \$12 per, often necessitating nights and nights of sleepless vigilance.

"Struggle and hardship! I say to the younger men—you don't know what struggle meant. If only we were to eliminate the chiseler class from our free clinic and hospital service—a thing easy of accomplishment; if we only sublimate our grumbling into concerted action—there will be more than enough to go around, despite the dispro-

portionate increase of doctors to the population.

"Discounting therefore, all the ballyhoo, and the exaggerated emphasis upon our existing faults, the problems of the medical profession can be summarized briefly as consisting of the question of how to make a decent and respectable living for ourselves, and at the same time give adequate medical treatment for poor and rich alike—a problem to be solved by our own peers and not by lay people lording over us. In other words my slogan is: Medical liberty or Medical death. Socialized medicine far from solving our problems will merely increase taxation; will poison medical science with politics; will deprive patients of the most valuable part in the art of medicine—personal confidence and sympathy between doctor and patient; will impede scientific progress and initiative; and will be discriminatory to the medical group by forcing it to live an isolated existence on a socialistic island in the sea of capitalistic society."

A rather strange feature of the prevalence of measles in New York City is that it shows a marked increase every second year. The city department of health reports that in the control of measles the injection of parent's whole blood into children who are known to have been exposed to infection has proven of value. The technic is simple. Physicians may obtain a pamphlet describing the method in detail by writing to Dr. Charles Bolduan, Department of Health, 139 Centre Street, New York City, and by asking for "Measles Reprint."

Some good work has been done by the Westchester County Society during the past year in giving the State Board of Medical Examiners considerable information regarding the illegal use of the term "Dr." by optometrists, chiropractors, and the like without the proper qualifications as required by law and also by several unlicensed practitioners in the county. The Board of Examiners has welcomed these complaints and has acted promptly to have such abuses stopped.

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EDITORIALS

Facts vs. Calumny

Opponents of the Medical Abuses Bill have attempted to hide the real issues at stake behind a smoke screen of calumny against organized medicine and the medical prosecuting agencies of the state. If any refutation of these unfounded charges is necessary, it is furnished by the official records of the State Education Department and the Medical Grievance Committee.

Having deprived the profession of any voice in the administration of workmen's compensation, those opposed to the free choice of physician are now attempting to shift the blame for the consequences from their own shoulders by accusing the state and county medical societies of delinquency in failing to weed out incompetent and corrupt practitioners. It is incredible that the calumniators of organized medicine do not know that its disciplinary powers extend only to violations of the ethical canons of practice. Even the Grievance Committee's jurisdiction is limited to strictly defined circumstances.

In spite of this sharp circumscription of authority, considerable progress has been made in the eradication of charlatanism within and without the profession. This is attributable solely to the splendid co-operation existing between organized medicine, the State Department of Education, the Grievance Committee, and the Assistant Attorney General in charge of medical practice.

Since the amended Medical Practice Act went into effect in 1926, more than 3,395 complaints have been investigated, of which approximately two-thirds showed cause for action. Close to 1,500 violations were stopped without court procedure. Of the 562 cases in which prosecution was instituted, the remarkable proportion of 84 per cent resulted in convictions.

In the six years from September, 1928, to July, 1934, the Medical Grievance Committee disposed of 355 complaints against physicians, embracing a wide variety of offences. As a result of its investigations, eleven licenses were revoked, six suspended and formal censure administered in eight cases. The disciplinary activities of the Grievance Committee have had a twofold aim—not only to curb irresponsible practitioners but to protect reputable physicians against unwarranted charges of incompetence and malpractice.

No small part of the excellent results cited is due to the vigorous policy pursued by the State Department of Education. It is not mere chance that no chiropractic bill has been introduced in the State Legislature in the past two years or that henceforth the requirements for admission to osteopathic schools will be the same as for medical college.

The splendid work of Dr. Harold Rypins and Deputy Attorney General Ullman negates loose talk of uncurbed

malfesance in medical practice, just as the accomplishments of organized medicine controvert the ridiculous charges leveled against it. In no other field of human activity has as severe a discipline been self-imposed for the elevation of professional standards and the furtherance of the public good.

An Undesirable Anomaly

The more imminent danger of compulsory health insurance has served to divert attention and criticism from the aims of the Medical League for Socialized Medicine. Going further than most of the lay reformers who desire to modify the economic pattern of healing, this little group of physicians is prepared to abandon the entire framework of the past for the dubious shelter of governmental employment.

It is difficult to understand how physicians can be willing to throw overboard the traditional personal relationship between their patients and themselves unless they view healing as no more than a mechanical trick of fitting designated remedies to specified ills. Unfortunately this narrow concept of practice dominates the attitude of most of those endeavoring to subordinate the doctor to bureaucratic control. It so far colors the theories of the Medical League for Socialized Medicine that this body of doctors wishes to destroy the free choice of physician, giving district hospitals the right to designate medical attendants for patients within their jurisdiction. A strange form of socialism this, which takes from the mass of the people a fundamental right which they have always jealously cherished.

The platform of the Medical League for Socialized Medicine does not derive strength from comparisons with the postal service or the schools. In the handling of the mails, it is the system rather than the individual which counts. While this is not true in teaching, mass methods are nevertheless more practicable in education than in healing. The teacher deals with classes, but every medical act is individual and gains in effectiveness as it is adapted to the requirements of the particular

patient. It is this modification of general principles to the individual organism which makes for quality in practice, and it is precisely this element which is lost under compulsory health insurance or the impersonal system advocated by the Medical League for Socialized Medicine.

In return for the sacrifice of independence and opportunity which they are prepared to make, the medical advocates of state medicine envisage secure jobs and a steady income for all practitioners. This halcyon dream is shattered by the experience of the very teachers and mail-men whom the officers of the League hold up as an example. When the political bosses of Chicago emptied the treasury, the teachers of that city went unpaid for months. The story of the depression is replete with wholesale dismissals of government employees and extensive pay cuts. Teachers have been on waiting lists for years without seeing job or salary.

Fortunately the misguided members of the Medical League for Socialized Medicine are not likely to have an opportunity to suffer the consequences of their unsound scheme. In a state which must look to taxation for all moneys, it is not feasible for the government to take over the responsibility of medical care for the entire population. Capitalist nations do not furnish suitable soil for socialized medicine.

Fatalities from Appendicitis

No less an authority than Dr. Charles Gordon Heyd stated recently that "within very definite limitations, there should be no deaths from appendicitis." Nevertheless, the *American Journal of Surgery* presents the startling announcement that in this country, a death occurs from appendicitis every thirty-three minutes. In his address before the New York Academy of Medicine, Dr. Shepard Krech¹ stated that an average of eleven hundred persons died annually of appendicitis in New York City during the last six years.

¹ Krech, Shepard: The Problem of Acute Appendicitis in New York City, *NEW YORK STATE JOURNAL OF MEDICINE*, Vol. 35, No. 6, March 15, 1935.

That these figures are disturbing and should lead to correctional measures is obvious. Cases should not come to surgery with proof of neglect and delay. The tragical error of administering cathartics must be avoided. Better and surer early diagnosis, and the realization on the patient's part of the gravity of appendicitis, must be comprehended. Procrastination and surgical postponement have no place in therapy. A better understanding of both preoperative and postoperative care will help better the therapeutic results of surgery.

The root of the grave crisis in appendicitis mortality may lie in the fact, as the *American Journal of Surgery* hints, that "familiarity breeds contempt." Our belief that appendicitis had been conquered made us over-confident. The realization of our mistake is the first step toward further progress.

The Limitation of the Bacteriophage

We were startled some years ago by the news that "a bacteriophage" had been discovered. Twort and d'Hérelle held out the hope that by the administration of a bacteriophage, the body would quickly rid itself of pathogenic organisms, and by this means even such scourges as plague, cholera, and typhoid could be conquered.

But what seemed the dawn of a new day soon turned out to be a very cloudy sunrise. A test-tube is one thing, and a sick human is another. What succeeded *in vitro* did not work so well, or completely failed, *in vivo*.

For six years commercial bacteriophage preparations have been on the market. None has yet been accepted for inclusion in New and Non-official Remedies by the Council on Pharmacy and Chemistry of the A. M. A. In spite of vast literature, there is confusion, and the Council authorized the publication of a report made by Drs. Monroe D. Eaton and Stanhope Bayne-Jones, of Yale University School of Medicine, who having made an exhaustive investigation of the entire matter, made a report on what they find to be true, and what they term false, what is

valuable, and what is worthless in the use of the bacteriophage. This report¹ should be studied in detail by those interested who wish to be fully informed.

These investigators found that the human blood or serum apparently inhibited the activity of the bacteriophage, and this explains why it acts *in vitro* better than *in vivo*. But, if such is the case, why does it work in the human body at all? The investigators report that "the favorable results may have been due to the specific immunizing action of bacterial proteins in the material used, and to non-specific effects of the broth filtrates." As for the "bacteria eater" itself, "there is no evidence that lysis or killing of bacteria by bacteriophage occurs *in vivo*, except possibly in the bladder, and in walled-off spaces where little exudate is present, and where irrigation with large amounts of bacteriophage can be used."

We Destroy Ourselves

By direct advertising to the laity, certain drug manufacturers have made marked inroads upon both medical and pharmaceutical practice. Physicians should not order preparations so advertised. The medical profession has helped to build up the common use of controlled-name proprietaries by sheer apathy in the matter of prescription writing. It can destroy the evil it has helped to create by vigorous eschewal of products that conflict with its own and the public welfare.

Prescription writing is rapidly becoming a lost art, as doctors rely increasingly on widely advertised products.

Physicians are in a strong position to discourage the evils that have grown out of the widespread employment of controlled-name preparations. The U. S. Pharmacopoeia, the National Formulary, and New and Non-official Remedies, contain the equivalent of almost every proprietary in current use. Wherever possible, the profession should order the products listed in these authoritative guides.

The proprietary substance almost in-

¹ *Journal A. M. A.*, Dec. 8, 15 and 22, 1934.

variably is more expensive. In the patient's interest, write your own prescription.

The Narcotic Evil

In the recent Federal activity against criminals, the round-up brought in, among others, illegal drug vendors of habit-forming drugs. There is an aspect of the question of controlling addiction to habit-forming drugs to which preventive measures could well be applied.

Competent authorities contend that the international control of the manufacture of these habit-forming drugs would be the first real step toward the suppression of the illicit traffic. Knowledge of legitimate medicinal requirements in each country, production strictly controlled and manu-

facture limited to that requirement, would so curtail the supply that there would be little of these drugs available for illegal uses. The Health Committee of the Assembly of the League of Nations has the matter under consideration now.

Adscititious to the question, a more healthy viewpoint is current among physicians. Informed opinion today does not hold the physician responsible for the prevalence of addiction, nor does each arrest of an addict or a vendor cause a cry to be raised demanding more stringent supervision and control of the physician's use of habit-forming drugs in the course of medical practice. The truth of how small a rôle he plays in the causation of addiction seems to have become generally comprehended.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

New York City
March 13, 1935

To the Editor:

In the March 1 issue of the JOURNAL you published certain statements taken from my report on the German Sick and Health Insurance. In doing so, you created the impression that it is my opinion that the German Sick and Health Insurance has been completely insufficient and unsatisfactory for both doctor and patient. This is, of course, not the case.

When, some months ago, the President of the New York Academy of Medicine suggested that I write on my lengthy experiences in and with the German Sick and Health Insurance, I felt highly gratified. I did so, motivated mainly by the desire to help other

countries avoid the mistakes made in Germany. I bared all possible mistakes, errors, and deficiencies of the German system, but made it clear nevertheless that the German Sick and Health Insurance possessed numerous admirable features.

I am firmly convinced that a well organized Sick and Health Insurance System is of greatest possible advantage to both doctors and patients. The value of this system for the people has been fully recognized in Germany, especially in the smaller cities.

Thanking you in advance for publishing my views in the next issue of your paper, I remain

Very sincerely yours,

M. M. ZACHART, M.D.

SECOND ANNUAL NOBEL DINNER

World Peaceways, a "non-profit organization for public information on peace and international affairs," has arranged that its second annual Nobel Dinner will be held on Tuesday evening, April 9, 1935, at the Waldorf-Astoria Hotel in New York City.

At this dinner Dr. Arthur J. Bedell of Albany will be one of the guests of honor representing as President the Medical Society of the State of New York.

Invitation is extended by World Peaceways to all members of the Medical Society of the State of New York to make reservations at this subscription dinner to the Nobel Prize winners.

Inquiries for reservations should be addressed to George J. Ryan, Chairman of Dinner Committee, c/o World Peaceways, which has offices located at 103 Park Avenue, New York City.

Society Activities

Committee on Scientific Work

Dr. Krieger, in charge of the Scientific Exhibit at the Annual Meeting in Albany, May 13 to 15, announces that all possible space for this exhibit at the Hotel Ten Eyck has been assigned and that no further applications should be made as they can only be accepted provisionally.

WILLIAM A. GROAT, M.D., Chairman

Committee on Legislation

SPECIAL BULLETIN, MARCH 19, 1935

The Medical Abuses Bill passed the Assembly the afternoon of March 19 and will go to the Governor for his signature.

Let us transfer our wholehearted support to our Hospital Lien Bill, Senate Int. 1266, Print 1895, now in Rules Committee in the Assembly. Wire immediately to your Assemblymen urging their support of this measure.

HARRY ARANOW
B. B. BERKOWITZ
B. WALLACE HAMILTON
JAMES F. ROONEY
LEO F. SIMPSON
Committee on Legislation

Committee on Public Health and Medical Education

The Committee has been devoting considerable time to the study of pneumonia. In co-operation with the New York State Department of Health and the Metropolitan Life Insurance Company plans have been developed to combat more effectively this common and dreaded disease. The agencies concerned in this endeavor realize that little can be accomplished without the co-operation of the public. Publicity and educational methods to be employed should result in more serious efforts on the part of the public to assist the medical profession and health officials to lessen the incidence of pneumonia and, by early medical and nursing care, to lower the death rate.

The scientific knowledge regarding the causes and specific treatment of certain types

of pneumonia has been laboriously and expensively ascertained. Greater effort should be made to disseminate this knowledge. Some of the most important information regarding pneumonia which should be impressed upon the public is that:

(1) Pneumonia is one of the chief causes of death.

(2) Pneumonia is always—although there are yearly fluctuations in the incidence—one of the group of diseases which takes the greatest toll of life.

(3) Pneumonia is caused by certain kinds of bacteria.

(4) These bacteria are transmitted from one person to another in the discharges of the throat and nose.

(5) Pneumonia works fast. The incubation period is short. The onset is often abrupt. The course of the disease is rapid.

(6) A person with a severe cold, which is often accompanied by a chill, chilly sensations and pain in the chest, should go to bed, remain quiet, and send for his physician.

(7) Early diagnosis is essential if much is to be accomplished by specific treatment.

(8) Competent nursing care is very important.

(9) Laboratory service is necessary to determine the type of bacterium causing the disease.

(10) A sputum specimen and a blood culture should be obtained as soon as possible.

(11) In certain types of pneumonia serum treatment, if used early, yields good results.

(12) Self diagnosis and the use of home remedies too often delay calling the physician early.

Announcements will be made by the Committee concerning the statewide measures to be employed by the organizations interested in this effort to reduce sickness and deaths from pneumonia. Suggestions and inquiries regarding educational and publicity methods, laboratory facilities, or other features of the program will receive careful consideration if addressed to the Committee on Public Health and Medical Education. Thomas P. Farmer, M.D., Chairman, 608 East Genesee Street, Syracuse.

"BRANDING THE MAVERICKS"

The doctors are keeping a keen eye on the legislators to see how they vote on measures touching the profession. In picturesque phraseology the *Journal of the Indiana State Medical Association* gives this advice:

"Let us inquiringly search out the legislative mesquite and the administrative underbrush and unmistakably brand with blackball

votes those mavericks whom we have reason to suspect of long-haired theories and pop-eyed reforms as regards goose-stepping the medical profession. Politely, yet firmly insistent, let us present the wool-gatherers with one-way tickets to their farms and forges and ribbon-counters and trash-littered desks and dust-covered law books."

Current Comment

The problems which face organized medicine, have been heard on the stage, over the radio, and on the platform of formal debate. It is delightfully unfolded now in a novel by Allen Hart, entitled "Dr. Mallory." While no opinion is here expressed as to the views presented in the book, the following comment by the leading character is informative: "I guess I'm a conservative radical. Anyhow, I want to hang on to the ideals of our profession, use them for guides. I'm not afraid of state medicine, but I'm not sure it's the solution for our troubles either . . . Let's not throw away our old galluses, until we see how dependable the new-fangled braces will be."

There has been formed in New York City an *Interne Council*, which publishes a paper called, *The Interne*. Among its basic aims are the following: Improvement of educational, laboratory and living facilities at the various New York hospitals; securing the passage of legislation providing for the insurance of internes injured, disabled or dying in the course of duty; securing eventually, compensation for internes; to facilitate inter-hospital activities of a clinical and possibly of a social and recreational nature; to foster conferences, seminars, and other educational programs of primary interne interests; to establish a central interne organization which might effectively represent interne affairs, and so forth. Organized medicine should be proud to welcome its future leaders in this, their early endeavors. It is a step in the right direction.

Another evil of Panel Practice is disturbing England. Now it seems that the British Medical Association is investigating an evil that has sprung up in the north of England, where physicians have been buying panel practices by mortgaging them to money lenders. This, of course, gives the money lender a financial interest in the practice, and a hold on the doctor. The London correspondent of the *Journal of the A. M. A.* says that in some parts of the north of England it is difficult to purchase a practice from a physician, because the financial corporations get in first and offer cash down. They also circulate newly qualified men, pointing out how easy it is to purchase a practice as they provide the money. The procedure has a bad influence on the efficiency of the service. The financial corporations make tempting offers to sellers, and therefore, impose onerous conditions on buyers, who may have difficulty in fulfilling their obliga-

tions and resort to canvassing and the easy issue of certificate in order to get patients.

The English are trying now to frame a scheme with a medical insurance agency for the purchase of practices whereby reasonable security being afforded, the whole of the money might be provided under terms not too onerous or likely to commercialize the practice.

Although short wave therapy has been known in England for many years, it is a new process in the United States. It is important that the medical profession become acquainted with this field of therapy.

Short wave therapy is a form of radiation, the rays differing from X-ray and gamma rays in their length. It is alleged to be superior to diathermia. It can be used in acute infections where diathermia is contra-indicated. Physicians should study this subject carefully from proper professional sources, and reject information from lay physiotherapists, quacks, and cultists.

In a recent address, Dr. S. S. Goldwater said among other things: "My idea of a hospital is one run from the inside . . . If political pressure or powerful opinion is exerted from the outside, the hospital and the profession of medicine are bound to suffer . . . One-half of the City's population [New York City] since the depression, has looked to the public hospitals for care."

Among the various schemes to bring patients and doctors together and provide means for paying for the service, is a new plan which has been proposed by Dr. Caldwell B. Esselstyn, and analyzed by a subcommittee of the Committee on Economics of the Medical Society of the County of New York. It is essentially a plan of group medicine, advocated for incomes up to \$15,000 annually. The plan was not approved.

Dr. Edward H. Ochener of Chicago, writing in the *Medical Record* of March, 1935, says that he has been "*viewing with alarm* the reckless, and what seemed to me, uncalled for coining of new words. . . . It has almost come to the point that a specialist in one of the branches of the healing art is unable to understand a fellow practitioner in another medical specialty. . . . This tendency is especially dangerous because no man can become or remain a really competent specialist, or even general practitioner, who does

County Societies

Albany County

The following committees to handle the work of the Albany County Medical Society have been announced by Dr. Walter A. Reynolds, President. The first named in each case is chairman:

Program: Dr. E. E. Hinman, Dr. Erastus Corning, Dr. W. P. Howard, Dr. A. VanderVeer, Dr. Harold Peck. Legislative: Dr. Joseph Lawrence, Dr. J. F. Rooney, Dr. F. C. Conway. Public health: Dr. Otto Faust, Dr. D. V. O'Leary, Dr. F. W. Dodge. Economics: Dr. John Gutman, Dr. Charles K. Winne, Dr. C. A. Traver. Physiotherapy: Dr. J. W. Ghormley, Dr. P. L. Forster, Dr. Milton Aronowitz. Public relations: Dr. Joseph Kiernan, Dr. I. J. Murnane, Dr. L. A. Sutton, Dr. Louis Hacker, Dr. J. F. Mosher. Press relations: Dr. Arthur W. Wright, Dr. A. L. Madden, Dr. Albert VanderVeer, 3rd, Dr. M. O. Barrett, Dr. Robert Faust. Cancer: Dr. C. F. Graham, Dr. John Heslin, Dr. A. J. Wallingford.

Broome County

Deploring medical information placed before the public for commercial purposes, the Broome County Medical Society is planning a campaign to educate the people on medical matters.

The educational program covers a wide range of subjects, the outstanding one being health insurance. Other constructive medical subjects are being prepared.

Erie County

The proper medical education of the public will rid us of many of the evils that now plague the medical profession, declared Dr. Herbert H. Bauckus in his presidential address before the Medical Society of the County of Erie on January 21. "Education," he said, "will place the proper stamp upon quackery and nostrums, unnecessary and poisonous drugs, exaggerated radio advertising, cults and fadists, illegitimate practitioners, and in general all schemes cruelly making fear and credulity tools for financial gain. The financial, physical and mental cost of these is appalling. Education will serve to make more useful citizens of those now opposed to the applications of scientific facts in our public health administrations,—if these persons would read the unbiased history of tuberculosis, smallpox, diphtheria, typhoid fever, typhus fever, yellow fever, malaria, bubonic plague, in fact any disease, few of them would longer revile our public health laws. The same history will convince

one of the great value of post mortem examinations and the absolute necessity of animal experimentation. This education is largely our duty and problem. In this we need the aid of every educational institution from the kindergarten to the college."

Kings County

"Alumni Day" of the Long Island College of Medicine will be celebrated on Saturday, April 27, with the following program:

11:00 A.M.: Clinical Hall, Polhemus Building—"Modern Treatment of Syphilis," Dr. Paul O'Leary (Cl. '15), Professor of Dermatology, Mayo Clinic; Discussion by Drs. Alfred Potter, Luther F. Warren and Thurman Givan.

1:00 P.M.: Luncheon at Long Island College Hospital, Main Dining Room (Courtesy of the Hospital)—Speaker, Dr. Henry Wallace (Cl. '90), "Memoirs of an Old Timer."

8:00 P.M.: Annual Alumni Banquet, Knights of Columbus Building, 1 Prospect Park West, Brooklyn N. Y.—Speaker of the evening, Dr. William A. White (Cl. '91), Professor of Mental and Nervous Diseases, St. Elizabeth Hospital, Washington, D. C.

Dr. John J. Black was re-elected president of the North Brooklyn Medical Society at the annual election of officers. Other officers are: Dr. Samson Seeley, vice-president; Dr. William F. Walenta, recording secretary; Dr. Vladimir Smith, corresponding secretary; and Dr. William Haupt, treasurer.

More than 500 persons prominent in medical, military, and political life attended a dinner at the Hotel St. George, Brooklyn, in honor of Dr. Philip Goldstein, chief surgeon of the Harbor Hospital, attending surgeon at Coney Island Hospital, and Captain in the 105th Field Artillery.

A silver flatware dinner service and tray were presented to him. The dinner was in recognition of Dr. Goldstein's service in philanthropic, patriotic, and medical fields.

Uncompromising views on medical ethics are held by Dr. J. Sturdivant Read, the new president of the Kings County Medical Society. The medical society is the group which should protect the people from fee-splitting and other shady practices, he holds. He said further in a press interview: "Publicity has been responsible for many misunderstandings of and violations of medical ethics. The case

of Dr. Dafeo, who was feted recently for his work with the quintuplets, is of special interest because he showed good taste throughout the ordeal of publicity.

"Good taste or background is valuable in my profession, as it marks the distinction between a professional man and a business man. The latter, quite rightly, seeks to gain the most profit from any deal. But this should not be so with the doctor. He must always remember that his patients are in no humor to bargain. During the past twenty years the medical profession in this country has admitted many who do not understand this viewpoint."

Monroe County

Joseph P. MacSweeney, chairman of the Rochester Committee of the Tuberculosis and Health Association, on February 16 announced the appointment of Dr. John J. Lloyd and E. R. Stonaker to head the subcommittees on tuberculosis service and health education, respectively.

He also announced the re-establishment of a health education service in parochial schools, discontinued some time ago on account of fund shortage.

Other activities discussed included health examination promotion in co-operation with the Chamber of Commerce, an early diagnosis campaign sponsored by the Medical Society of the County of Monroe, and maintenance of a demonstration and exhibit service in the public schools with the co-operation of the Department of Health Education and the Health Bureau.

Dr. George G. Carroll was elected president of the staff of the Park Avenue Hospital in Rochester on February 14 at a meeting of the board of directors and staff at the Rochester Club.

New York County

Commissioner Goldwater has named Miss Irene Robertson director of nursing to succeed Miss Marian Rottman, resigned. The director's office will be moved from Bellevue Hospital to the central office of the department in the Municipal Building.

The appointment of Dr. Adam Eberle as acting general medical superintendent was also announced. Dr. Edward Bernecker, medical superintendent of the Metropolitan Hospital on Welfare Island, takes Dr. Eberle's place as medical superintendent at Kings County Hospital. Dr. Chrisman Scherf, superintendent at the Sea View Hospital, goes to Metropolitan Hospital, and Dr. Morris Jacobs, deputy medical superintendent at City Hospital, becomes acting superintendent at Sea View. Dr. Goldwater also announced the appointment of Dr. Charles

S. B. Cassassa as surgical director at Harlem Hospital.

Dropping of useless positions in the municipal hospitals during 1935 has already saved the city more than \$500,000.

Is smoking an etiological factor in peptic ulcer? Some have supposed so, but New York City figures reveal that during the past ten years, during which the proportion of women smokers has undoubtedly increased, there was a decline in the mortality of peptic ulcer among females. Statistics of deaths from cancer of the buccal cavity, too, fail to show any increased mortality since smoking among women has become more prevalent. In studying peptic ulcer it is interesting to note that during the past twenty years there has been a definite decline in the death rate among females while the death rate in males has increased markedly.

Here is a tragic lesson for parents: During the past three and one-half years 538 deaths of diphtheria were registered in New York City. Of this number 22 occurred in children who had received protective injections of toxin-antitoxin or toxoid, and 516 who had not received any protective injections.

How Federal officials spare fees is told in a letter from an ophthalmologist printed in the *New York Medical Week*. The case "was that of a traumatic cataract in which beginning infection was present. The patient was treated by me until infection was under control; the cataract was then operated upon, and normal vision resulted. The treatment lasted for over two months and included the original examination, sixteen office visits, operation for cataract and nine visits at the hospital. For these services after seven months I received a check for \$97.25 from Washington."

Agreement to drop the old 12-hour day for special duty nurses and to adopt the 8-hour day instead has been reached in 34 hospitals in New York City, compared with 21 a year ago, according to a report made public by the Committee on 8 Hours for Nurses.

To facilitate the placing of needy dependents, a survey of hospitalization in the city's five boroughs is being made by the Physicians' Wives' League of Greater New York.

Onondaga County

Group hospitalization for Syracuse moved one step nearer realization when five representative committees meeting on February 13 authorized the appointment of an advisory committee of 27 empowered to study plans.

The committees represented at the meeting included those from the health and hospital division of the chest and council, Central Trades and Labor Assembly, chamber of commerce, Onondaga County Medical Association and Syracuse Academy of Medicine.

Queens County

A keen thrust at the radio medical quacks and other such charlatans was delivered by Dr. Morris S. Bender in his inaugural address as President of the Queens County Medical Society. "If the people correctly understood the fixed causes of disease and how to avert them," he declared, "they would require a strong system of measures to effectively rid the Nation and the State of charlatanism, quackery, and the exploitation of health by manufacturers of nostrums whose advertisements are belched forth by glib-tongued radio orators and pseudo-scientists, whose words of wisdom on pink tooth brush, halitosis, and faulty elimination are so inspiring. How much health and how many lives are sacrificed to this greed for profit?"

The Plan and Scope Committee of the Queens County Medical Society announces plans for an elaborate Bazaar and Medical Exposition to be held in the Society Building from April 6 to 13, inclusive.

Many interesting innovations are to be presented. Special arrangements have been made to offer a new and unusual floor show every night. The exposition will provide opportunity to become acquainted with the talents of the Society's gifted members; of the many works of art, science, and handicraft to be exhibited, a considerable number will be the actual work of local members of the medical profession.

Merchandise of modernistic design has been received for display in the various booths. This bazaar will be the second to be held in the Society's building. The first was held at the official opening in December, 1930, and was very successful.

A beautiful Oldsmobile sedan is to be awarded to the winner of the door prize. Several other equally valuable prizes are to be awarded to the winners of the contests to be held, including a Ford sedan, or its equivalent, to the most successful lady contestant. All prizes and awards are to be distributed by the committee in charge and are not limited to members of the medical profession.

The Women's Auxiliary to the Queens County Medical Society voted an appropriation of \$200 to furnish a committee room for the doctors in the Medical Society Building, 112-25 Queens boulevard, Forest Hills.

Rensselaer County

Edward M. Wells, Jr., was elected president of the medical staff of the Leonard Hospital at the annual meeting held in the Hendrick Hudson Hotel, Troy, February 9. Dr. John F. Connor was named vice-president, and Dr. Mario J. Cuoco, secretary-treasurer.

Rockland County

Dr. James W. Smith has been appointed consulting ophthalmologist to the Nyack Hospital, Nyack.

Washington County

Dr. Harley Heath, 53, of Comstock, chief physician at Great Meadow Prison since it was built about twenty-four years ago, died February 12 at his home after a heart attack which followed two weeks' illness with a cold.

Westchester County

The proposal to establish a collection agency under the supervision of the County Medical Society has been referred to the Economic Committee for study. This matter was discussed at the last meeting: a final report will be submitted when the preliminary work has been completed. The committee remarks in the county *Medical Bulletin* that it is "very doubtful" if such an agency "would be an effective substitute for that which doctors in general fail to do themselves."

The County Medical Society is organizing a speakers bureau service, to be offered to service clubs, women's clubs, church groups, P. T. A. chapters, study groups, chambers of commerce, etc., throughout the County. This service is to be announced both in the papers, and directly to the organizations which will find it useful. These groups will be invited to communicate with the Executive Office of the Society when speakers are desired on any topics in the realm of medicine, public health, or medical economics. The Executive Office will keep a cross-index file of speakers and the subjects they have volunteered to speak on. An announcement says:

"Speakers are needed. If you are willing to assist the Society in this important work, please notify the Society, listing the general topics, or if possible, specific titles upon which you are prepared to speak before lay groups. If you are interested in a certain topic, but desire a bibliography on it to assist you in further preparation, please so indicate."

Dr. James A. Tobey, of Rye, was elected president of the Westchester Tuberculosis and Public Health Association at the annual meeting of the executive committee.

Medicolegal

LORENZ J. BROSNAN, Esq

Counsel, Medical Society of the State of New York

Autopsies in Cases of Suspicious Deaths

Recently in one of the Mid western States, a case* came before the courts in which the right of a coroner to perform an autopsy in a case of suspicious or accidental death, was challenged.

A married man was found by his wife, sitting apparently dead, behind the wheel of his automobile in the garage. One door of the garage was found partly open. Assistance was summoned, and firemen with a pulmotor, an ambulance physician, and a deputy coroner promptly responded. Attempts to resuscitate the man failed. The deputy coroner, Dr. W., directed an undertaker to take the body to the County morgue, where he ordered another physician, Dr. C., to perform an autopsy. No notice of this order was given to the widow. The autopsy was performed and the findings were that the man had died of monoxide gas poisoning.

The widow upon learning of the performance of the autopsy, brought an action against the undertaker, Dr. W., and Dr. C. to recover damages for wounded feelings. The claim was made that the case was not a proper one to permit a coroner's autopsy, and further, that the autopsy was improperly performed. Upon the trial of the action the plaintiff proved substantially the facts set forth above. She did not, however, offer any competent proof to show that the body was excessively mutilated or that the organs of the deceased were not replaced after examination. So far as appeared from the testimony, the autopsy was performed in the usual customary manner. At the close of the plaintiff's case the defendants moved to dismiss the action relying upon statutory authority for their acts. The Court ordered a directed verdict in favor of the defendants.

It appeared that the statutes of the State in question provided that the coroner of the respective Counties should investigate and issue his death certificate in all cases of "Violent, mysterious and accidental deaths, including suspected homicides." The statute also made it unlawful for the body of such a person to be removed or interfered with except in connection with the coroner's investigation or until its completion.

The plaintiff in the action took an appeal from the Trial Court's ruling and the highest Court of the State affirmed the decision

of the Court below. The Appellate Court conceded that in ordinary cases the widow has the legal right, which the law will protect, to possession of the dead body of her husband for purposes of burial, and that a wrongful mutilation of or interference with the corpse would entitle the wife to damages against the wrongdoer. The Court decided that in the case before it, no wrong was shown and stated in its opinion:

There can be no doubt that Mr. K's death came within the class of deaths the coroner was required by this law to investigate. And for the purposes of such investigation Dr. W. had exclusive control of the body. He could direct the undertaker to carry the body to the county morgue if he deemed it necessary for an investigation. An autopsy may be the surest and most satisfactory way of determining that the death was accidental, and since the statute provides that the coroner "shall order an autopsy when and where he deems proper," the conclusion is inescapable that the coroner may as an aid to his investigation order an autopsy. The coroner is also by law required to make the death certificate necessary, and therein state the cause of death. To do so accurately he may have considered it necessary to have an autopsy. It is true that he may not arbitrarily order an autopsy when a properly made investigation has disclosed to him the cause of the death. It cannot be made to satisfy an idle curiosity, or for the information of some interested insurance company, or to give some doctor a fee, or for a purpose not within the law. The fact that plaintiff was not informed that an autopsy was contemplated (though she knew that the body was taken to the County morgue) does not tend to prove arbitrary exercise of the coroner's discretion.

In this State should a similar situation arise, the ruling of the Courts should be to the same effect. The Penal Law (Sec. 2213) provides that the right to dissect the dead body of a human being exists:

Whenever a coroner is authorized by law to hold an inquest upon a body, so far as such coroner authorizes dissection for the purposes of the inquest, and no further,

The Code of Criminal Procedure (Sec. 773) provides as follows:

Whenever a coroner is informed that a person has been killed or dangerously wounded by another or has suddenly died under such circumstances as to afford a reasonable ground to suspect that his death has been occasioned by

* *Kingsley v. Forsyth* 257 N.W. 95

criminal means, or has committed suicide, he must go to the place where the person is and forthwith inquire into the cause of the death, or wounding, . . .

In an informal opinion handed down by the Attorney-General a few years ago, the extent of the permission granted to coroners under the law was interpreted as follows:

A coroner is justified in ordering an autopsy if he deems the same necessary for the purpose of obtaining evidence as to the cause of death or the manner in which death was inflicted.

The Public Health Law contains the following provision in connection with violent deaths (Sec. 378):

In case of any death occurring without medical attendance, it shall be the duty of the undertaker or other person to whose knowledge the death may come to notify the local health officer of such death, and when so notified the health officer shall immediately investigate and certify as to the cause of death; provided that if the health officer has reason to believe that the death may have been due to unlawful act or neglect he shall then refer the case to the coroner or other proper officer for his investigation and certification.

It would seem from said provision that a health officer is not ordinarily empowered to perform an autopsy without consent from the deceased's relatives and next of kin, but if he feels a crime has been committed it becomes his duty to notify the coroner, who has power to hold an autopsy regardless of the consent of the relatives and next of kin of the deceased person.

As to the City of New York, the Greater New York Charter contains special provisions whereby a medical examiner is authorized to take charge of investigating violent and suspicious deaths and to perform autopsies in proper cases. Sections 1571 and 1571-a of the Charter provide in part as follows:

When, in the city of New York, any person shall die from criminal violence, or by a casualty, or by suicide, or suddenly when in apparent health, or when unattended by a physician, or in prison, or in any suspicious or unusual manner, the officer in charge of the station house in the police precinct in which such person died shall immediately notify the office of the chief medical examiner of the known facts concerning the time, place, manner and circumstances of such death. Immediately upon receipt of such notification the chief medical examiner, or a deputy or assistant medical examiner shall go to the dead body, and take charge of the same. Such examiner shall fully investigate the essential facts concerning the circumstances of the death, . . . If the cause of such death shall be established beyond a reasonable doubt, the medical examiner in charge shall so report to his office. If, however, in the opinion of such medical examiner, an autopsy is necessary, the same shall be performed by a medical examiner. A detailed

description of the findings written during the progress of such autopsy and the conclusions drawn therefrom shall thereupon be filed in his office.

Treatment of Injured Wrist

A woman about fifty years of age, complaining of an injured wrist, called a doctor who specialized in surgery, to her home. The doctor learned that she had been engaged in some sort of an argument with a man who had grabbed her right wrist and twisted it, causing it to severely pain her. The doctor immediately applied an emergency splint and suggested hot applications and sent her the same day to the office of a nearby x-ray specialist to have x-ray plates taken. The report which was made on the x-ray plates showed that the wrist was normal and negative for any fracture or dislocation. The doctor after receiving the said report again examined the patient and found apparently no deformity other than swelling and undertook to treat the injury as a sprain.

The doctor next saw her about ten days later and at that time the wrist was still swollen but not so badly as it had been before. He told the patient to continue hot applications and to return to his office in about a week. The patient did not return and he heard nothing further about the matter until approximately two years after the occurrence, when the patient came in and exhibited her wrist. She, at that time, had with her an x-ray plate that had been taken a short time before. The patient's wrist then was somewhat deformed and the use of her fingers seemed to be limited. The doctor did not treat her but suggested she return to the doctor who had been caring for her and at whose request the x-ray that she exhibited had been taken. Within a few days after the said visit, papers were served upon the doctor commencing a malpractice action in which it was charged the doctor had improperly treated the injury and had caused her to sustain a result which constituted loss of function of the hand.

Investigation showed that at no time had any diagnosis of fracture or dislocation been made by any doctor; that shortly after she was treated by the defendant she went to another doctor who had put the wrist up in a splint for about six weeks. After the said treatment she had apparently neglected the condition for a considerable period of time and a deformity had developed as a result of which the plaintiff carried her hand flexed at an angle about 30 degrees from normal and that she had become unable to use the wrist or fingers to any extent. The case came up for trial before a judge and jury and during the second day of the trial the plaintiff's attorney apparently realizing that he was un-

able to prove his cause of action against the defendant doctor, discontinued the action.

Death Following Taking of Pill Containing Strychnine

A woman about sixty years of age called a physician in general practice to her home, and upon examination he found her to be complaining of a severe cough and suffering from chronic myocarditis, nephritis, and bronchitis. He gave her various medicines for her condition and saw her for several consecutive days. At the end of that time the doctor found the patient's heart condition was not satisfactory and wrote out a prescription for certain tablets, each to contain 1/30th of a grain of strychnine sulphate. Later the same day he was called to the patient's home and found that she was in bed suffering from cramps of the muscles of the backs of the legs. He was informed she had taken one of the tablets which he prescribed. The doctor suspected an overdose of strychnine and upon investigation found

that the druggist had made a mistake and instead of filling the prescription properly, he had put one grain of strychnine into each tablet. The doctor gave the patient emetics and she apparently responded to the treatment and seemed to improve. However she passed away the second day after she had taken the medicine.

An autopsy which was performed, failed to reveal that the overdose of strychnine had hastened the death of the patient for the findings indicated that the actual cause of death was heart disease.

An action was brought by the patient's administrator against the doctor, to which the druggist was also a party, in which the claim was made that the doctor was negligent in improperly prescribing for his patient and as a result of said claim of negligence, the patient died. Plaintiff's attorney never brought the case on for trial and after some time had elapsed an application was made to the Court on behalf of the defendant to dismiss the complaint, and the court ordered the dismissal of the action so far as the doctor was concerned.

MISLEADING DENTAL ADVERTISING

Some of the exaggerated claims made for dental preparations in the advertisements are given a dose of common sense by Dr. W. M. Gardner in *Hygeia*. For instance, we are assured in the ads that alkaline dentifrices will neutralize mouth acids and make them harmless, but the fact is that the decay is caused by "spot" acidity, a little acid factory protected by a mucin film which the dentifrice cannot penetrate. It takes the stiff bristles of the brush to break through this film, and even then the saliva can do the work of dilution and neutralization without the aid of an alkaline dentifrice. Antiseptics and germicides in dentifrice fail in the same way. Dr. Gardner also tells us that medicines and drugs in dentifrice are of no value, for they cannot prevent or cure pyorrhea or other gum diseases.

Neither is a mouth wash a therapeutic agent for diseased gum tissue, he adds, and recommends as the safest and cheapest mouth washes the following: warm water; a normal salt solution made by adding 1 teaspoonful of salt to 1 pint of water; a normal salt solution to which a pinch of baking soda, sodium bicarbonate, or borax has been added.

The curative power of mouth washes on gum tissue has been grossly overestimated. Mouth washes are ineffective in the chronic case of pyorrhea usually seen, neither checking nor curing the disease. The problem in successful treatment of pyorrhea is primarily the removal of all things that irritate the gum tissue, such as tartar deposits and faulty dentistry, and the bringing about of an active blood exchange in the gums by means of massage with a toothbrush.

It is well known, of course, that mouth washes cannot correct faulty dentistry. Mouth washes are also ineffective in stimulating gum tissue,

being quite incapable of bringing blood to the areas involved; many mouth washes contain astringents which tend to keep the blood from coming into the area.

Mouth washes that are sold as pyorrhea cures are usually advertised as germ killers, and no doubt some of them are, if they are held in the mouth for a sufficient length of time. But germs are merely secondary factors in pyorrhea, entering the gums only after a lesion has developed from irritations. The bacteria normally found in a healthy mouth are as incapable of producing disease as are the bacteria on the palm of the hand. In both instances, a break in the tissue is a prerequisite of infection.

Proprietary mouth washes, irrespective of their claims, should be regarded merely as pleasantly flavored solutions for mouth toilet, quite on a par with such other toilet articles as talcum powder, toilet waters, and perfumes. There can be little objection to their use if they contain ingredients that are harmless.

Bellevue Hospital recently acquired a new problem in diet in the form of a sidewalk showman whose stock in trade is a demonstration to passersby of his ability to swallow razor blades, pins and ground glass, says *Health Digest*. When arrested he protested, "You're interfering with the NRA—arresting me is restraint of trade—I earn my living this way." Magistrate Harris summed up the situation differently by saying, "Roughage may be excellent for the health but such meals are undoubtedly not what the doctor ordered." The showman is now safely in the observation ward.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Body Mechanics in the Study and Treatment of Disease. By Joel E. Goldthwait, M.D. et al. Octavo of 281 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1934. Cloth, \$4.00.

Sculpture in the Living. Rebuilding the Face and Form by Plastic Surgery. By Jacques W. Maliniak, M.D. Octavo of 203 pages, illustrated. New York, The Lancet Press, 1934. Cloth, \$3.00.

The Physical and Mental Growth of Prematurely Born Children. By Julius H. Hess, M.D. et al. Octavo of 449 pages. Chicago, University of Chicago Press, [c. 1934]. Cloth, \$5.00.

Salt, Water and Health. By Frederick Hoelzel. Nar. Octavo of 32 pages. Chicago, Frederick Hoelzel, 1934. Paper 50 cents.

Outlines for Psychiatric Examinations. Edited by Clarence O. Cheney, M.D. Octavo of 134 pages. Utica, N. Y., State Hospitals Press, 1934. Cloth, \$1.50.

Standard Classified Nomenclature of Disease. Compiled by the National Conference on Nomenclature of Disease. Edited by H. B. Logie, M.D. Duodecimo of 870 pages. New York, The Commonwealth fund, 1935. Cloth, \$3.50.

Franklin Paine Mall. The story of a Mind. By Florence Rena Sabin. Octavo of 342 pages, illustrated. Baltimore, Johns Hopkins Press, 1934. Cloth, \$2.75.

A Brief Outline of Modern Treatment of Fractures. By H. Waldo Spiers, M.D. Octavo of 129 pages, illustrated. Baltimore, William Wood & Co., 1935. Cloth, \$2.00.

The Surgery of the Sympathetic Nervous System. By George E. Gask and J. Paterson Ross. Quarto of 165 pages, illustrated. Baltimore, William Wood & Co., 1934. Cloth, \$4.00.

Aids to Embryology. By Richard H. Hunter, M.D. Second Edition. Sexdecimo of 172 pages, illustrated. Baltimore, William Wood & Co., 1934. Cloth, \$1.25.

Aids to Psychiatry. By W. S. Dawson. Third Edition. Sexdecimo of 318 pages. Baltimore, William Wood & Co., 1934. Cloth, \$1.50.

The Crippled and the Disabled. Rehabilitation of the Physically Handicapped in the United States. By Henry H. Kessler. Octavo of 337 pages. New York, Columbia University Press, 1935. Cloth, \$4.00.

Human Anatomy, Double Dissection Method. By Dudley J. Morton. First and Second Dissections. Quarto of 265 pages, illustrated. New York, Columbia University Press, 1934. Cloth, \$6.00.

Stammering and Allied Disorders. By C. S. Bluemel, M.D. Duodecimo of 182 pages. New York, Macmillan Co., 1935. Cloth, \$2.00.

Rats, Lice and History. Being a Study in Biography, which, after Twelve Preliminary Chapters Indispensable for the Preparation of the Lay Reader, Deals with the Life History of Typhus Fever. Octavo of 301 pages. Boston, Little, Brown & Co., 1935. Cloth, \$2.75.

Modern Operative Surgery. Edited by G. Grey Turner, F.A.C.S. Second Edition in two volumes. Octavo of 1760 pages, illustrated. Baltimore, William Wood & Co., 1934. Cloth, \$16.00.

A Synopsis of Surgical Anatomy. By Alexander Lee McGregor, F.R.C.S. Second edition. Duodecimo of 644 pages, illustrated. Baltimore, William Wood & Co., 1934. Cloth, \$6.00.

Diabetes Mellitus and Obesity. By Garfield G. Duncan, M.D. Octavo of 215 pages. Philadelphia, Lea & Febiger, 1935. Cloth, \$2.75.

Infantile Paralysis. By George Draper, M.D. Octavo of 167 pages. New York, D. Appleton-Century Co., 1935. Cloth, \$2.00.

How to Practice Medicine. By Henry W. Kemp, M.D. Octavo of 158 pages. New York, Paul B. Hoeber, Inc., 1935. Cloth, \$2.50.

One Hundred and Fifty Years of Publishing 1785-1935. Octavo of 42 pages, illustrated. Philadelphia, Lea & Febiger, 1935.

Alcohol and Anaesthesia. By W. Burrige, D.M. Octavo of 65 pages. London, Williams & Norgate, Ltd., 1934. Cloth 2/6.

Oedemes et Congestions Pulmonaires. By Drs. G. Caussade & André Tardieu. Duodecimo of 266 pages, illustrated. Paris, Félix Alcan, 1934. Paper 25 francs.

A Synopsis of Medicine. By Henry Letheby Tidy, M.D. Sixth edition, Revised and enlarged. Duodecimo of 1112 pages. Baltimore, William Wood & Co., 1934. Cloth, \$6.00.

System of Diet Writing. Including Diet Calculator, Obesity Chart, Diet Formulary, 100 Menu Prescription Forms. By William S. Collens, M.D. New York, Form Publishing Co., [c. 1933]. Cloth, \$5.00. Oblong 16mo. of 142 pages.

Disease; Gadfly of the Mind. By Wm. Allen Pusey, M.D. Octavo of 20 pages. London, H. K. Lewis & Co., 1934.

Hughes' Practice of Medicine. Revised and Edited by Burgess Gordon, M.D. 15th ed. Duodecimo of 808 pages illustrated. Philadelphia, P. Blakiston's Son, [c. 1935]. Cloth, \$5.00.

The Medical Clinics of North America. Vol. 18, No. 3. November, 1934. (New York Number) Octavo. Published every other month by the W. B. Saunders Co., Philadelphia. Per Clinic year (6 issues). Cloth, \$16.00; Paper, \$10.00.

REVIEWED

Manual of the Diseases of the Eye. For Students and General Practitioners. By Charles H. May, M.D. Fourteenth Edition. Octavo of 496 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$4.00.

If Fuchs' textbook is the Ophthalmologists' bible this little volume surely should be called his testament. Full of meat as a nut it is kept fresh and modern by frequent editions, and is a thoroughly reliable and instructive manual.

In the present edition sufficient changes in the text have been made to bring it up to date and two new colored plates added, one illustrating detachment of the retina with a tear. The chapter on retinal detachment is characteristic of the book—a concise, restrained and thoroughly modern description of this interesting condition and its treatment.

E. CLIFFORD PLACE

The Spastic Child. By Marguerite K. Fischel. 12mo. of 97 pages, illustrated. St. Louis, C. V. Mosby Company, 1934. Cloth, \$1.50.

The writing of this little work was urged by the late Dr. Nathaniel Allison, the well known orthopedist. He suggested to the writer, the mother of two boys, who were victims of spastic paraplegia (Little's disease), to pass along her methods of re-education of muscles to other such victims.

We believe there is certainly no more pitiable deformity to behold and certainly no more difficult one to treat than this class of cases.

The foundation of her work is fundamentally one of great patience and much hard work. The book contains the etiology, speech correction, physiotherapy, and orthopedic mechanical aids, not overlooking the guidance of this type of child in school work, home surroundings, sports, and the social problems encountered. The methods employed finally restore the adult spastic to his citizenship and a useful place in his community.

JOSEPH I. NEVINS

The Power to Love. By Edwin W. Hirsch, M.D. Octavo of 363 pages, illustrated. New York, Alfred A. Knopf, 1934. Cloth, \$4.00.

Love, according to most medical writers, implies solely the gratification of physical pleasures in both the male and female. According to that theory, free-love based on illicit sexual relationships should mean the ideal love; and liberal divorces and companionate marriages should be justified for the attainment of love.

Admiration, affection, loyalty, devotion, romance, mutual comfort, and friendship seem to play no part in the author's conception of love. Love signifies solely an anatomical attraction, something possessed especially by the young adult. And as we unfold the covers of this book, we hardly find mention

of even the word "love," but we read of sexual debility, frigidity, premature ejaculation, sexual fear, and of all the other disturbances which cast a pall on the sexual act. The information is readable and follows the routine adopted in other popular books on sex.

While the title, "*Power to Love*," seems appealing to the lovelorn reader, the caption, "*Power to Copulate*," would seem to fit in with the textual reading.

EMANUEL KRIMSKY

Papers of Charles V. Chapin, M.D. A Review of Public Health Realities. Selected by Frederic P. Gorham, Sc.D. Edited by Clarence L. Scamman, M.D. Octavo of 244 pages. New York, The Commonwealth Fund. Cloth, \$1.50.

This book presents sixteen of the papers written by Dr. Charles Value Chapin and selected as representative of the contributions he has made in the fields of public health administration, communicable disease control, epidemiology, and vital statistics.

It should be tremendously interesting and stimulating to all students of the development of modern public health methods. Through the eyes of this outstanding leader, we see in outline the advances made in the public health field during half a century.

Notable among the sixteen chapters are those on studies in air and contact infection, quantitative methods in epidemiological work, and on the principles of epidemiology, as well as the chapter which considers the changes in the type of contagious diseases.

In these papers we see clearly the viewpoint of this pioneer in public health and preventive medicine, this public health officer, with his common sense and practical, logical and scientific mind, with his precision of method and honesty of thought and purpose, and his never failing courage in upholding the truth—the truth which he so often so studiously and with such great tenacity work to bring to light and which he had in many instances the almost prophetic vision to see. Dr. Chapin's life and work provide an outstanding example, in our times, of the finest traditions of the medical profession and of inspiring leadership. Here is a record of rare accomplishment by a public official who ever considered his public office—a most of honor and a sacred trust—in which he could well serve humanity by giving the utmost measure of service from a keen intellect.

JOSEPH C. REGAN

Practical Talks on Heart Disease. By George L. Carlisle, M.D. Octavo of 153 pages. Springfield, Ill. [c.1934]. Cloth, \$2.00.

In simple, conversational language, Carlisle presents a series of talks, covering in 140

pages the subject of heart disease, from history taking to cardiac neuroses. The book is intended for the "general practitioner," but it will hardly satisfy the physician who is keenly interested in his work, for it conspicuously lacks the qualities of thoroughness and depth. Space is not used to best advantage. A terse direct style would have permitted adequate and more scientific presentation of the subjects considered.

The author is emphatic in his disposal of "mitral regurgitation," accomplishing it with one sweep of the broad-sword, and burying its remains. This reveals an interesting and forceful individual point of view, but what shall we say when on page 73 he discusses the soft systolic murmur of "mitral leak" in acute rheumatic heart disease?

Is it not, forsooth, high time that mitral regurgitation should be recognized for what it is, with its triad of criteria in diagnosis:

the murmur, the moderate enlargement of the heart, and the accentuation of the second pulmonic sound! We should think of it as due either to dilation of the orifice or to defect of the valve. If rheumatic fever has damaged the valve, a certain sequence of events is to be expected and we will eventually look for the development of mitral stenosis (found always at the autopsy of cases dying with mitral rheumatic heart disease) but we must not expect to find stenosis from the beginning of the valvular involvement. Much pathological experience supports this opinion. In the early stage of mitral disease therefore, we should recognize that mitral regurgitation may be definitely present and that it is a reality.

"Myocarditis" as a term in diagnosis assuredly requires modification and definition. With the author's statement, the reviewer is in full sympathy. FRANK BETHEL CROSS

NEW HEALTH RECORDS FOR NEW YORK CITY

Despite the unfavorable influences of the economic depression, New York City established several new records in health during 1934, says the *A.M.A. Journal*. The general death rate was 10.15 per thousand of population, the lowest in the history of the city; the actual number of deaths was 75,857. The greatest number of deaths (30,948) occurred in the group of diseases of the heart, arteries, and kidneys, including cerebral hemorrhage. Tuberculosis, which has steadily decreased in the last ten years, caused 3,950 deaths, a rate of 52.85 per hundred thousand.

This result, a new low point, was attributed to efficient organization of relief and to intensified control activities, such as improved x-ray equipment, extension of facilities for pneumothorax treatment, and better follow up of cases. The pneumonia death rate in 1934 was the lowest on record, but this was partly attributed to the low prevalence of measles and the absence of an influenza epidemic. Fewer cases of diphtheria were reported to the health department than in 1933, but deaths increased from 86 to 103, indicating a more severe type of the disease, according to the report. The death rate from whooping cough declined from 25.7 in 1933 to 21.99 per hundred thousand of population under 5 years of age in 1934. Only 76 cases of poliomyelitis were reported, with 12 deaths. There were 44 deaths from typhoid, a rate of 0.59 per hundred thousand of population, new low records. The cancer death rate has again increased, being 127.1 as compared with 121.6 in 1933.

The health department has endeavored to focus attention on diabetes as a health problem but, as it is not a reportable disease, figures on its prevalence are not available. The registered death rate rose in 1934 to 30.3

from 29.1 in 1933, but this is believed to be due to the aging of the city's population and to more frequent recognition of the disease. Appendicitis mortality was lower than at any time in the last five years, 13.45 as compared with 15.64 in 1934 and 16.32 in 1931. The death rate from automobile accidents declined from 15.45 in 1933 to 15.28 in 1934; the rate in 1930 was 18.53. The suicide death rate, which began to increase in 1929, reached its highest point (22.1) in 1932 and in 1934 decreased to 16.43. The infant mortality rate in 1934 was 52.22 per thousand births, a reduction from 1933, but not so low as the 1932 rate, 50.91. The birth rate continued to drop, being 13.55 per thousand of population in comparison with 17.64 in 1930. During the past year the department has designated certain "sore spots" on which it is concentrating its activity.

Evidence that leprosy may be spread by healthy, unsuspected carriers of the infection, has been reported by Dr. N. E. Wayson, director of the Leprosy Investigation Station at Honolulu, to the United States Public Health Service, notes the *Medical Record*. Just as with typhoid fever and diphtheria, persons may be infected with the bacillus of leprosy and remain well for a long time, if not for the rest of their lives.

It was found over a period of years in the careful examination of children of leprosy parents that the disease was attacking them. There was definite evidence of this in the condition of their small blood vessels and certain nerves, long before other signs of leprosy could be detected. These evidences could further develop into the disease, or become normal as the years progressed.

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MEDICAL SOCIETY OF THE STATE OF NEW YORK ANNUAL REPORTS, 1934-35

REPORT OF THE PRESIDENT

To the House of Delegates; Gentlemen:

It is my pleasant duty to report to you on the activities of the Society.

District Branches

Fortunately, I was able to attend every District Branch Meeting and to note the keen interest in medicine displayed by those who came to the sessions. In addresses to these groups I referred to some of our statewide services and tried in that way to have them appreciate that their officers were vitally concerned with their personal welfare. All of the meetings were well attended and the scientific papers were of the highest order. It is to be regretted that in some districts where the material for exhibition was most abundant and where there was the greatest concentration of medical men, the attendance was poorest and the participation in district affairs least evident.

County Societies

The County Societies have been active, have held their meetings at regular periods and some have published monthly bulletins.

Committee Meetings

Many meetings of standing committees, the conference of the county secretaries and the gathering of the chairmen of the county legislative committee were attended. The latter two are annual affairs of supreme importance to the practitioners of medicine in this state for they serve to unify and co-ordinate the work of the Society.

On December 20, 1934, there was a special meeting of the members of all standing committees to correlate the busi-

ness of the Society and avoid the friction which was present last year and which was becoming evident in this administration because of overlapping investigations and pronouncements. After a day of open discussion it was the consensus of opinion that there would be less annoyance in the future if each committee would restrict its operations to its own field of endeavor.

The members of the standing committees of the Society are theoretically nominated by the president and elected by the Council. In reality the president has nothing to do with their selection or control over their functions. It would be infinitely better for you, the House of Delegates, to elect them or give the president full power to appoint them.

Standing Committees Reports

The Committee on Scientific Work under the direction of Dr. William A. Groat and the chairmen of the sections has prepared programs which will appeal to every forward looking physician. The subjects chosen are timely.

Dr. James E. Sadlier's Committee on Public Relations has worked with its usual zeal to improve the contacts of physicians and laymen. Its most noteworthy achievement has been to call attention to the pitiable state in which the deaf child is allowed to drift without medical diagnosis or supervision.

The Committee on Economics with the dynamic chairman, Dr. Frederic E. Eliott, will present its voluminous report for your perusal.

Public Health and Medical Education, as you will note from the report of the Chairman, Dr. Thomas P. Farmer, has

been interested in not only supplying the demand for postgraduate courses but also in protecting the physician from further incursions by outside groups. This Committee has always paid the men who have delivered the lectures. As far as I know, no other State Society does this. To have the opportunity of delivering a course of lectures before medical men has always been considered a privilege and no remuneration should be expected. Obviously, expenses should be paid but no honorarium should be given. If this method was established the State Society would save a large sum, the quality of the lectures would in no way suffer and it would be possible to extend the number of courses.

The Committee on Legislation under the guidance of Dr. Harry Aranow has continued to widen its sphere of influence and serve in a devoted way. Even the examination of their detailed reports will not convey an appreciation of the magnitude of their task and a mere formal vote of thanks will not discharge our debt of gratitude to this important committee.

At this time it is impossible to render a report on the vital legislation which is before the New York State Legislature and the National Congress. A supplementary report will be presented at the Annual Meeting.

Dr. Frederic C. Conway and his Committee on Arrangements have made elaborate plans for the housing of the sessions and the entertainment of the members.

Bureau of Public Relations

During the year the Committee on Trends under the chairmanship of Dr. James F. Rooney established the Bureau of Public Relations. Its sphere of usefulness and of influence is almost unlimited, and under the guidance of the wise men who are now in control of that Committee we anticipate a steady improvement in the recognition of medical problems by the laymen, as well as the presentation of authentic information to the members of the Society. The releases sent to the press have been very favorably received. The Bureau will have entire charge of publicity at the annual meeting.

Finance

Treasurer Charles H. Goodrich will report that the Society is financially sound, that so far it has weathered the storm of depression, that the securities are of the highest type, that the members are paying their dues and that the expenses have been carefully controlled.

State Journal

The STATE JOURNAL is improving in appearance, but as I have had a very high ideal for the JOURNAL, I am still disappointed and am more convinced than ever that it is absolutely necessary to employ a full-time editor, and further that the JOURNAL should be under complete State Society control. Such a director would cost little more than the method under which we are now functioning, for I believe that he could be secured for \$6,000, while at the present time we are spending at the rate of more than \$3,600 for part-time service. By regulation of the JOURNAL, we would not have complaints about financial and liquor advertisements which some think most objectionable in a scientific medical publication. There has been a very notable improvement in the reports from County Societies and Medical Notes. There should be more comments on legislative and social security proposals and additional pages devoted to the dissemination of such information rather than abstruse statements which are suggestive of personal opinions not substantiated by experience.

State Department of Education

During the year it has been possible for your officers to establish a cordial relationship with the New York State Assistant Commissioner for Higher Education, Dr. Harlan H. Horner, and as a result of that contact have a fuller appreciation of the problems which confront those who control the licensure of physicians and many of the functions of that department which are so intimately associated with the practice of medicine, including authority over the Grievance Committee.

The Albee Case

It is fitting that you should know that the New York County Medical Society

suspended Dr. Fred H. Albee from membership for a year because of what the members considered to be unprofessional conduct. Dr. Albee appealed to the Board of Censors of the State Society which assembled, listened to legal arguments, and then unanimously upheld the verdict of New York County. At a later time the Executive Committee of the Society, at the request of Dr. Walter T. Dannreuther, the President of the New York County Medical Society, for financial assistance, asked the Board of Trustees to appropriate \$1,500 for expenses contingent upon the continuance of the case in the courts of the State because the Executive Committee felt that the jurisdiction of the State Society had been raised as an issue. It was the understanding of some of us that the money was to be spent in financing an appeal to the higher court. Some of the Executive Committee were disappointed when they read that the case had been closed and that a few days before the termination of the period of suspension Dr. Albee was reinstated to membership in the New York County Society.

He was suspended from the New York Academy of Medicine, June 26, 1934, on charges arising from the same alleged offense. He appealed from the verdict but the Appellate Division of the Supreme Court unanimously upheld the decision of the New York Academy of Medicine.

Nominating Committee

You are conscious that a small self-perpetuating group attempts to control the policies of this Society. They are without delegated authority and I suggest to you that it would be much wiser, and in the long run healthier, for the House of Delegates to elect annually a Nominating Committee to serve for the following year and that no one be permitted to remain on that Committee for more than three consecutive terms. This must not interfere with nominations from the floor and the report of the Committee must be published a month before the session at the time the Annual Reports appear in the JOURNAL. The members should be selected with due regard to their geographical distribution.

Full-Time Executive Secretary

To those who have been in close association with the functions of the Society, there has been an increasing conviction that there should be a full-time executive in charge of the affairs. For efficiency, economy, and the correlation of the infinite activities of the organization, such a change is imperative. When special committees ask for more clerical assistants, for increased appropriations, and for the sanction of new plans, the time for centralization of executive supervision has arrived. The central office should be the source of information, inspiration, and direction. From it every county society should receive suggestions for the improvement of its scientific programs, for its contacts with the innumerable lay organizations which constantly attempt to usurp the powers of the medical profession. Central control would enable those responsible for the conduct of the affairs of the State Society to be in closer touch with those outside of the Society who wish to confer with them, suggest to them, or be instructed by them. The time will come when such a central bureau will be established, for its value has been proven by the experience of many organizations including the American Medical Association. The sooner it is done the better for the medical profession.

Clinical Conferences

From experience in other medical societies, I suggest the inauguration of a new type of State medical education—clinical conferences. This of necessity means the selection of speakers who excel in the treatment of the subject under discussion and who have the ability and the desire to clearly and succinctly place facts before their audience. I would suggest that this innovation be started next year and that the day following the close of the regular meeting be devoted to a series of short lectures and demonstrations so comprehensive in range that they will appeal to every member in the Society and so conveniently scheduled that those who wish can have a complete day of postgraduate instruction. If such a scheme is adopted, I will be very glad to appear before the Committee and go into the elaboration of the plan. By this

method money would be saved, energy conserved, and more members benefited.

Wherever conflict arises between the Constitution and By-Laws and these suggestions, amendments of the former can be made and ratified.

Appreciation

In closing my year, I wish to thank you for the opportunity of serving the Society. I feel as did Dr. Dean Lewis at the expiration of his term as President of the American Medical Association, that: "One must accept such an honor with humility, for one must realize that one cannot discharge efficiently the duties that one assumes and must be called on frequently to make decisions that will not be approved." I have kept free from all semblance of entangling alliances and have refrained from accepting any appointments on the Board of Directors of any other medical or lay association.

It is with pleasure that I acknowledge my indebtedness to all who have helped

to improve the status of the physician and who have assisted in the conduct of the technical affairs of the State Society. It is not possible for me to name each of you individually—the list would be too long—but to every one my personal appreciation is extended, and especially to Dr. Daniel S. Dougherty for his skillful guidance, to Miss L. Baldwin for her enduring tact and comprehension of Society affairs, to Dr. Joseph S. Lawrence for his unfailing co-operation, courtesy, and constant help, the Chairmen and members of the standing and special committees, and our efficient legal counsel, Mr. Lorenz J. Brosnan.

The State Society must accept its responsibility of inspiration and central control so that the efficiency of the physician in administering to the public may be increased and his material interests protected.

Respectfully submitted,

ARTHUR J. BEDELL, *President*

April 1, 1935

REPORT OF THE SECRETARY

To the House of Delegates; Gentlemen:

Your Secretary has the honor of presenting his tenth annual report.

It was with considerable reluctance and misgiving that ten years ago he allowed himself to be elected to this office but he is happy to be able to say that during this time his official and personal relations with the Society and its membership have been of the most friendly and courteous character, and in many instances acquaintanceship has grown into warm friendship.

The Society

The constant and steady growth of the Society in membership and activities has continued during the past year and the increase in knowledge of and interest in these activities speaks well for the soundness and health of this growth. More and more has the membership come to realize the benefits to be accrued only from organized medicine and the necessity of unity and solidarity in thought and action. These attributes are absolutely necessary to resist the warfare that is being constantly waged against us by those both within and without who would

change the character of medical practice and place it under lay and political domination. Your Secretary has in a former report called attention to the dangers of individualism and the over-enthusiasm which often causes thoughtless haste, and these dangers exist just as strongly today.

Although the Society now occupies a more important position and exerts more influence than in former years the necessity of an earnest study of the economic and social problems affecting organized medicine is becoming more and more evident.

The Society's Office

In an attempt to avoid the confusion which seems to exist even among our members, the Secretary once more calls attention to the location of the general administrative office which is situated at 2 East 103rd Street, New York City. The office at 100 State Street, Albany, houses the Legislative Bureau, and the office at 33 West 42nd Street, New York City, is that of Mr. Thomas R. Gardiner, Business Manager of the JOURNAL. Official communications sent to the Secre-

try should be addressed to the administrative offices

There have been no changes in the Secretary's general office staff of which staff he is justly proud. He feels that there exists nowhere a more efficient, courteous, and obliging group of employees. Without this staff and especially without Miss Baldwin, his office manager, the work could not be carried on as smoothly and efficiently as it is. Too much cannot be said regarding Miss Baldwin's wonderful knowledge of the workings of the Society, past and present, and her intelligent, comprehensive grasp of details.

Financial Department

In these times of financial stress, the Society is to be congratulated that its finances remain in the same capable hands which have guided and guarded them in the past. The Board of Trustees remains unchanged and it is to be hoped that it shall so remain for time to come. When Dr Chas Gordon Heyd gave up the Treasurership to assume higher duties there was some doubt as to the future of the office but Dr Frederic E. Sondern soon dispelled these doubts. When he in turn assumed higher rank these fears returned but as Dr Charles H. Goodrich, our present Treasurer, began his duties doubt was again dispelled and the Department is on as fine and solid a basis as it ever was.

Owing to various comments and inquiries regarding the appropriations, the Secretary again takes opportunity to inform the members that these appropriations are never paid in bulk but are more in the form of a drawing account, individual bills being rendered and when paid charged against the appropriation. Should the entire appropriation not be used the balance remains in the Treasury.

Legal Department

This Department remains under the skillful guidance of Mr L. J. Brosnan, our Counsel, and Mr T. H. Clearwater, our attorney. With Mr Brosnan's defense of malpractice suits our members are well acquainted but few know of the extremely valuable advice and assistance he has given the Executive Committee with which he sits at all its sessions.

The Secretary personally acknowledges with thanks Mr Brosnan's assistance and advice and his never failing courtesy.

Legislation

Through the mixes of political and legislative mysterious workings your Legislative Committee and Executive Officer have guided the Society without mishap. No legislation detrimental or prejudicial to the interests of the profession has been enacted and to date many bills supported by the Society have passed.

In the general rejoicing that the new compensation law has been enacted we must soberly consider what this means to the County Societies. Upon them will devolve onerous duties and great responsibilities and in accordance with the manner in which these duties are performed and the responsibility recognized will rest the success or failure of the measure. County Society secretaries should make an intensive study of this law, take due notice of its provisions, and act accordingly.

Committees

It is superfluous to say that the work of the Committees has been excellent—it always is. The loyal and self-sacrificing members of the Society who give their time and thought to these Committees deserve the thanks and commendation of the Society.

Your Secretary thanks the Chairmen of the Committees for their kind invitations to meet with them. Although he is constitutionally an ex-officio member of these committees he has always deemed it well to refrain from attending their meetings, as he believes the presence of an officer of the Society might hamper free discussion and the work of the committees. When he expresses his appreciation of the work he feels that he is voicing the opinion of the Society.

District Meetings and Conferences

It was with extreme regret that the Secretary found that his custom of attending the District Branch Meetings had to be abandoned. Time, health and weather were elements over which he had no control and he was able to attend but one meeting. He expresses his sincere

thanks to the Councillors for their kind invitations.

Some years ago he relegated to the Executive Officer, Dr. Lawrence, his duty of assisting in the organization and programs of these meetings and obtained from the Trustees a small annual appropriation to defray the expenses incurred by meetings of a "District Executive Committee." This plan has resulted in an increase of interest and growth in attendance and the meetings have been productive of much good to the Society.

This may also be said of the Conference of Secretaries and of Legislative Chairmen and the Secretary hopes that these Conferences be continued as being well worth the money expended.

The Secretary takes the liberty of calling the attention of the Councillors, especially those who assume office directly after the Annual Meeting, to their duties regarding visiting their County societies annually and investigating the condition of the profession in the County in accordance with Chapter 7, Section 10, of the By-laws. He stands ready to advise and aid them in this work (By-laws Chapter 6, Section 6).

General

The Secretary announces with great sorrow the death of our distinguished friend and associate, Dr. Wendell C. Phillips, former President of the Society and of the American Medical Association. On behalf of the Society the Secretary caused announcements to be published in the press and floral tributes sent. He recommends that the House by formal action pay fitting tribute to his memory.

Mention should be made of two activities which are still in their infancy and in the experimental stage: the District Committees, to contact organized groups within our ranks, and the Public Relations Bureau, under the auspices of the Committee on Trends. This Bureau is under the direction of Mr. Dwight Anderson with offices at 2 East 103rd Street, New York City.

To the President, Dr. Arthur J. Bedell, and to the other members of the Executive Committee, the Secretary extends his thanks for their support and friendship. He could not close this report without special mention of two men, Dr. Peter Irving, the Assistant Secretary, and Dr. Joseph S. Lawrence, the Executive Officer. When he says that these gentlemen are earnest, enthusiastic, and efficient workers and men of high character, he speaks advisedly, for he has worked, travelled, and lived with them. Their work deserves the commendation, not only of the Secretary, but also of the Society.

MEMBERSHIP STATISTICS

Membership December 31, 1933	12,578	
New members, 1934.....	736	
Reinstated members, 1934....	323	
		13,637
Deaths	157	
Resignations	97	
Membership automatically ceased through rescinded license	1	255
		13,382
Dropped for nonpayment of dues December 31, 1934.....		559
		12,823
Elected after October 1, 1934, and dues credited to 1935.....		349
		13,172

It is a pleasure to be able to report that there is a decided decrease in the number dropped for nonpayment of dues over last year. The list of Honor Counties is as follows: Broome, Clinton, Columbia, Delaware, Essex, Franklin, Fulton, Genesee, Herkimer, Montgomery, Ontario, Orange, Orleans, Oswego, Rockland, St. Lawrence, Schenectady, Schoharie, Schuyler, Seneca, Sullivan, Tioga, Tompkins, Washington, and Chenango—an increase of five Counties.

Respectfully submitted,

DANIEL S. DOUGHERTY, *Secretary*

April 1, 1935

REPORT OF COUNCIL

To the House of Delegates, Gentlemen

The Council has the honor of presenting the Annual Report which includes those of the Executive Committee, Committee on Publication, Committee on Insurance, and JOURNAL Management Committee

Two regular meetings have been held May 15, 1934, in Utica, and December 13, 1934, in New York City

Pursuant to the provisions of the By-Laws governing the constitution of the Executive Committee, the following members of the Council nominated by the President, were elected to serve with the Officers as the Executive Committee for the ensuing year Samuel J Kopetzky, C Knight Deyo, Clark G Rossman, John E Wattenberg, and Frederic C Conway

On nomination by the President, Frederic C Conway was elected Chairman of the Committee on Arrangements

It was decided that the 1935 Annual Meeting be held in Albany

On nomination by the President the following were elected members of the Standing Committees

Public Health and Medical Education
Russell L Cecil Leo F Schiff, Oliver W H Mitchell Martin B Tinker, Edward G Whipple and Clayton W Greene The Chairman of the Committee was granted the privilege of nominating the remaining members later

Public Relations William H Ross William D Johnson Augustus J Hambrook George M Fisher, and Thomas H Cunningham The Chairman of the Committee was granted the privilege of nominating the remaining members later

Economics Joseph P Garen Frederick M Miller, Joseph C O Gorman Cassius H Watson Terry M Townsend, Frederick S Wetherell, Edward T Wentworth, George C Vogt and Alfred E Shupley

Arrangements Stanley C Alderson Louis J DeRusso William P Howard, Joseph O Kiernan Richard A Lawrence Walter A Reynolds James F Rooney, and Edgar A Vander Veer

Legislation Bernard B Berkowitz, B Wallace Hamilton James F Rooney, and Leo F Simpson

The Executive Officer was officially designated to interview the Governor of the State of New York and bring to his attention the importance of having ade-

quate representation of the medical profession on his Special Advisory Committee on Relief and Welfare

A petition, requesting the creation of a Section on Physical Therapy, was referred to the House of Delegates

William A Groat was unanimously elected Chairman of the Committee on Scientific Work

The Council approved of the appointment of a Committee in each District Branch to contact those organized groups which exist within the ranks of organized medicine for the purpose of rendering available to the Officers and members of the Medical Society of the State of New York the objectives, studies, and purposes of these groups

The following resolution was adopted

In view of the determined and persistent efforts of certain foundations, welfare organizations, governmental agencies, and various groups of theorists with ideas based purely on sociological study to regulate and govern the practice of medicine, the Council of the Medical Society of the State of New York deems it both wise and necessary to reaffirm the stand against Compulsory Health Insurance and the regimentation of the Medical Profession taken on previous occasions and to place the Society squarely behind the ten points presented to and adopted by the 1934 House of Delegates of the American Medical Association And furthermore calls upon the Officers Committees and all loyal members to oppose and combat these evils wherever and whenever occasion arises with the distinct purpose of making known to the public and to the profession at large the official opinion of organized medicine in matters of importance to both physician and patient

A resolution seeking to interpret a previous ruling as to procedure of committee members when addressing other organizations was referred to the House of Delegates the Council, however, recording its opinion that the resolution in question should not be understood as estopping investigations, contacts, conferences with other organizations or with their representatives, which fall within the proper province of Committees

The following amendment to the Public Health Laws was approved

Providing that when the Public Health Council promulgates amendments to the

Sanitary Code, they shall not become effective until six months after they have been made, and that two members of the Public Health Council shall be practicing physicians.

Executive Committee

The Executive Committee has held regular meetings on the second Thursday of each month with the exception of July and August. At the first meeting it organized under the Chairmanship of Arthur J. Bedell. Samuel J. Kopetzky was elected Vice-Chairman. Lorenz J. Brosnan was appointed Counsel, and Thomas H. Clearwater, Attorney.

Although the work of the Executive Committee is of necessity more or less routine, it is of extreme importance. Many problems of interest to the welfare of the Society and of the Profession are constantly presented to it for solution and all of these have received most careful consideration.

In accordance with the By-Laws the Annual Budget was prepared and referred to the Trustees for the necessary appropriation.

The renewal of the contract with the Executive Officer was approved and referred to the Trustees.

James K. Quigley and Fairfax Hall were elected to fill the vacancies on the Committee on Public Health and Medical Education.

Wendell C. Phillips was elected to fill the vacancy on the Committee on Public Relations. Owing to the death of Dr. Phillips, James M. Flynn was appointed in his stead.

William A. Krieger was elected a member of the Committee on Scientific Work.

The following Special Committees were appointed by the President:

Medical Research: John J. Morton, Jr., Chairman, John Wyckoff, G. Canby Robinson, Augustus B. Wadsworth, Edwin MacD. Stanton, Herman G. Weiskotten, Joshua E. Sweet, Allen O. Whipple, Marshall Clinton, Winfield W. Scott, Burton T. Simpson, Frank A. Hartman, Simon Flexner, and Peyton Rous.

Prize Essays: Eugene H. Pool, Chairman, Walter W. Palmer, and Albert C. Snell.

Trends in Medical Practice: James F. Rooney, Chairman, Chas. Gordon Heyd, George A. Leitner, Floyd S. Winslow and

David J. Kaliski. Dr. Heyd having resigned, Nathan B. Van Etten was appointed in his stead.

Insurance: Charles H. Goodrich, Chairman, and Samuel J. Kopetzky.

Budget: Samuel J. Kopetzky, Chairman, Daniel S. Dougherty, and Charles H. Goodrich.

Publication: Daniel S. Dougherty, Chairman, Clark G. Rossman, and C. Knight Deyo.

JOURNAL Management: Frederic E. Sondern, Chairman, Peter Irving, George W. Kosmak, Samuel J. Kopetzky, and Thomas M. Brennan. Dr. Sondern having resigned, Frederic C. Conway was appointed Chairman in his stead.

To Revise the Constitution and By-Laws: Daniel S. Dougherty, Chairman, Samuel J. Kopetzky, and Frederic E. Sondern.

To Review Legislative Work: Charles H. Goodrich, Chairman, and Frederic C. Conway.

In accordance with Section 1265 of the Medical Practice Act, Orrin S. Wightman, Chas. Gordon Heyd, and Peter Irving were nominated to fill the vacancy on the Grievance Committee which occurred on December 31, 1934, through the expiration of the term of Dr. Wightman.

In accordance with the provision of Article 52, Section 1383, of the Education Law, Nathan B. Van Etten and Peter Irving were nominated to fill the vacancy on the Nurse Advisory Council which occurred on December 31, 1934, through the expiration of the term of Dr. Van Etten.

A letter was received from Dr. Rypins, Secretary, State Board of Medical Examiners, stating that the suit against the Life Extension Institute was in the hands of the Attorney General and the Assistant Attorney General, Sol Ullman, had applied to Mr. Justice Collins of the Supreme Court of the County of New York for leave to have the matter heard by the Supreme Court.

The resignation of William A. Groat as President of the Fifth District Branch was accepted.

The recommendation of the Special Committee to Review the Legislative Work, that either the Chairman or two members of the Committee on Legislation be residents of Albany was referred to the House of Delegates.

The definition of the Insurance Com-

mittee, that members in good standing are those whose dues were received prior to June 1, was approved.

The ruling which required that original articles must be read before an official meeting of the Society, Annual, District Branch, or County before being published in the JOURNAL was rescinded.

The recommendations that an Assistant to the Executive Officer and a full-time Field Officer be appointed were laid on the table.

It was voted to hold the next Annual Meeting on May 13, 14, and 15, 1935.

The creation of a State Bureau of Arbitration for Workmen's Compensation was disapproved with the proviso that if two or more adjoining Counties had a common urban center the establishment of a Joint Arbitration Board might be of value.

A Press Relations Bureau under the control of the Committee on Trends was organized for the purpose of securing the publication of the true position of the medical profession in the press of this and other States and further to point out, by all means possible, the danger of socialized and other forms of medical practice which are neither in the public interest nor acceptable to the medical profession, and to obtain such other publicity as may be for the good of the public and the profession.

The Aetna Insurance Company was granted permission to issue a binder for malpractice insurance to applicants for membership with the proviso that the policy may be cancelled if election be not accomplished within six months; the binder being revocable, retroactive to date of issue in case the applicant fails of election to the County Society.

The Physicians' Home was informed that it would be impossible for the State Society to assume control of the Home, as such action would be unconstitutional.

The Committee on Economics was instructed to discontinue the Study of Cost Analysis until the House of Delegates has had an opportunity to reconsider the action taken at the last Annual Meeting of the Society.

The President was empowered to communicate with the President of the Women's Auxiliary of the American Medical Association toward the forma-

tion of County Auxiliaries in New York State.

Committee on Publication

The main duty of the Committee on Publication is the supervision of the publication of the Medical Directory. In doing this every effort has been made to present the best book possible for the use of the members who have so valiantly stood by the State Society in these times of stress. In order to do this no detail has been omitted which will add to the value of the Directory, including the verification of all hospital appointments.

The cost, in spite of the increase in the edition of some 300 copies due to the growing membership, after the allocation of \$1.00 per member, is only \$200.00 more than last year, which under present conditions and the difficulty of obtaining advertisements seems to bode well for the future. In fact, the sales have already substantially increased since the first of the year.

Committee on Insurance

This Committee has considered various questions referred to them by the Executive Committee which decisions have already been announced to the Society membership.

The binder for malpractice insurance operative from date of application for membership is a new provision allowed by the Insurance Company.

To contribute to the prevention of malpractice suits, editorials have been inspired and written and published in the JOURNAL.

The percentage of members now insured under the Group Plan is 56 per cent. This shows no change from a year ago. The Committee urges that every effort be made to largely increase the percentage of members insured. There is no measure of security for the practicing physician more dependable than this insurance, and there is in these times ever increasing necessity for such security. Moreover, every new participant aids in the co-operative effort that is made by the Society to provide security for its members. Greater participation may result in lowering rates. It is therefore truly a fraternal enterprise and indicates 100 per cent as the desirable participation.

The Journal

When, on January 1, 1934, the Executive Committee set in motion new machinery for publication of the JOURNAL it had two primary objectives in mind; and both have been reached. The cost of production has been cut in half; and the reader-interest has been increased. It is confidently expected that these gains will be consolidated and that further desirable advances will follow.

In 1933 the actual annual cost was \$1.49 per member. In 1934 the figure was 69 cents. Comparison with the record of 1932 and 1931 is even more favorable. When it is recalled that the Executive Committee on instituting the new plan for publication advised that \$1.00 per member be allocated to meet all expenses, it should be particularly gratifying to the membership to learn of the low figure actually established.

That more interest on the part of readers has been displayed and that it is steadily rising, while not demonstrable in figures, appears to be proven by reports from all quarters of the State. Moreover, there has in recent months been a noticeable increase of the flow into the JOURNAL office of articles submitted for possible publication from authors through the State.

Looking to the future the Executive Committee sees no reason why the NEW YORK STATE JOURNAL OF MEDICINE, from this time forward, should not steadily command more and more atten-

tion both within the Society and from the profession outside the State. The Committee will not be satisfied until it is assured that the members by and large eagerly await each issue in the expectation of finding what each desires in scientific content, editorial comment, news of society activities, medicolegal information, book reviews, and finally, news of all sorts, not necessarily purely medical, but from the many human sources that touch the physician in his life.

A "general" medical journal, as distinguished from a special journal, should seek to supply high grade professional articles to all groups, general practitioners, specialists in all branches and teachers of medicine. It is intended that this pathway shall be followed in such fashion as to supply material desired by physicians even outside our own membership. Papers actually read before the Annual Meeting, before a District Branch, or before meetings of the 60 County Societies will, as in the past, receive prior consideration, but articles from other sources will be welcomed and judged according to their merits.

The JOURNAL Management Committee supervising publication under the Executive Committee deserves commendation for its actual achievements and for its vision of improvements yet to come.

Respectfully submitted,

DANIEL S. DOUGHERTY, *Secretary*

April 1, 1935

REPORT OF COMMITTEE ON SCIENTIFIC WORK

To the House of Delegates; Gentlemen:

Your Committee has held two general meetings and there have been several special conferences. The Chairman wishes to express his appreciation of the earnest co-operation received from the Chairmen and Secretaries of the various sections in the preparation of the Scientific Program for the Albany meeting. Following the custom of the more recent years, there will be scientific meetings for each of the sections on Tuesday morning, May 14, beginning at 10:00 and on Wednesday, May 15, at 9:00 A.M. with general sessions on Tuesday and Wednesday afternoons at 2:00.

We are especially indebted to the President of the Society, Dr. Bedell, for his personal efforts in arranging pro-

grams for the General Sessions. By his invitation we shall have the privilege of hearing on Tuesday afternoon both the President of the American Medical Association, Dr. Walter L. Bierring, and the General Manager and Secretary, Dr. Olin West, who will speak to us of the special activities of the Medical Association and its reaction to the present day social unrest. For Wednesday afternoon he has arranged a series of short practical talks on simple clinical topics by eminent men.

In the Medical Section for Tuesday morning, papers are entirely for clinical application and of varied interest, with a guest speaker who presents his researches on certain phases of the treatment of anemias. With Dr. William P. Murphy,

one of the Nobel Prize winners in medicine, presenting some of the facts concerning the treatment of the anemias as one of the speakers at the general session on Wednesday afternoon, the meeting as a whole will be noteworthy and authoritative in matters pertaining to the blood

On Wednesday morning in the Medical Section there will be a broad discussion of the value of induced pneumothorax in the treatment of the lobar pneumonias, first by one who has had a considerable experience in this very recent mode of treatment and followed by a group of internists who also have found interest in it and have had recent experience with it

In the Surgical Section there is for Wednesday morning a symposium on surgery of the chest quite worthy of special comment

Several new surgical procedures are discussed in the Section on Obstetrics and Gynecology, and some constructive ideas on the relation of the glands of internal secretion to growth and development are to be presented and well illustrated

In the Section on Neurology and Psychiatry, the Chairman gives his address on Wednesday morning, presenting his ideas on the place neuropsychiatry should have in a general hospital, and the program bears out the importance of this general hospital relation, since it includes papers on the value of the erythrocyte sedimentation rate, certain facts about intracranial hemorrhage, acute encephalomyelitis, and intracranial complications of purpura hemorrhagica

In the Pediatric Section it is notable that investigations of natural and artificial immunizing agencies against whooping cough have been undertaken and that the controlling effect of the hormones of the anterior pituitary upon growth in children is to be discussed

In the Dermatological Section the program while of undoubted interest to the dermatologist and syphilologist, also carries such practical topics as "Sensitivity to Soap Solutions," "Burning Tongue," "Nails and Their Diseases," and the "Treatment of Cardiovascular syphilis"—all of undoubted general interest

Evidently the Section on Ophthalmology and Otolaryngology found their experiment with the instructional hour preceding both the Tuesday and Wednesday morning sessions last year satisfactory for they are continuing the practice. Other sections might well consider it. On Tuesday there will be an hour's study of the pathology of sympathetic ophthalmia, and of the anatomy of the temporal bone and nasal sinuses on Wednesday

The Section on Public Health devotes one session to immunization and prophylaxis including a symposium on poliomyelitis arranged by Dr William H. Park in which he has the co-operation of his associates, Dr Neal, who discusses the treatment of acute poliomyelitis, and Dr Brodie, the active immunization against this fearsome disease of childhood. This should attract worldwide interest. Active immunization against poliomyelitis is so new that the early clinical statistics are still in process of collection and the presentation by Dr Brodie will be concerning their experiences to date

For the Section on Urology, Dr Laurie has arranged a program of fine scope and has for guests Dr George G. Smith of Boston, Mass., and Dr Alexander Randall of Philadelphia, Pa.

The program on Radiology shows in particular what mass statistics on such topics as cancer, gastrointestinal diseases, and tuberculosis can be collected and reviewed by men in this specialty, and, when they add as these essayists do, a correlation of clinical diagnosis and autopsy in groups of four and five hundreds of cases, one finds general applications that give pause

A very fine Scientific Exhibit has been assembled by Dr William A. Krieger, who has been in charge of this portion of the Committee's duties. All available space has been utilized and an increased number of exhibits of the very highest character accepted. Dr Krieger has found it necessary to decline a number of very fine exhibits for no other reason than lack of facilities, notwithstanding a generous increase in floor area over previous years. To a high degree the exhibits relate to papers presented in the various Sections and Sessions

It also has been the experience of the

Section Chairmen that far more papers of excellent character are available than could possibly be crowded into a two-day meeting. Your Chairman confidently predicts that we will soon be having a three- or four-day scientific meeting and an

exhibit hall filled with exhibits and demonstrations of medical progress and clinical investigation.

Respectfully submitted,

WILLIAM A. GROAT, *Chairman*

April 1, 1935

REPORT OF COMMITTEE ON LEGISLATION

To the House of Delegates; Gentlemen:

This Committee regularly reports its activities so completely through our bulletin service, and so many of you receive those bulletins, that it is difficult to write a report for this occasion that will be interesting. In recent years it has become customary for us to preface our report by saying that it has been an exceptionally busy year and a greater number of bills affecting the profession was introduced than the year before. To be accurate we make the same observation again. Last year, although our report was written a week later, we reported that of 3,600 bills before the Legislature, 180 were of sufficient interest to the profession to be followed by the Committee. This year over 4,200 bills have already been introduced, of which 215 are of interest to us.

Naturally, most of the interesting bills relate to compensation or welfare. The undesirable bills that have for so many years annually presented themselves in Albany; viz., the antivivisection, antivaccination, chiropractic, and osteopathy bills, are represented this year by one antivivisection bill which was killed in the Assembly Codes Committee. Among the compensation and welfare bills there is only one proposing a form of health insurance or socialization of medicine. At this time that bill is still in committee in both houses. The compensation bill of last year was rewritten along the line suggested by the Governor in his message, and passed both houses with enormous majorities.

The Committee had drafted, in accordance with your instructions of last year, a certain number of bills; viz., a clinical laboratory bill including x-ray laboratories, a modification of the Public Health Council personnel, and a hospital lien bill. All of these have been introduced. We also endeavored to have reintroduced the following bills: Nurse anesthetist, hospital dispensary, and

central registration bureau, but we found the legislators unwilling to sponsor them.

The Committee has met regularly in Albany for the purpose of studying the bills as they were introduced and instructing our Executive Officer as to the position he should take upon them with the legislators. The annual conference of County Society legislative chairmen was held in Albany on January 31. Thirty-three County Societies were represented.

We have increased our bulletin mailing list so that all the members of each County committee, where the chairman has sent us the names, have received the bulletins. This has increased the work very considerably in the Legislative Bureau, but we believe that it has been worth the extra effort and expense. A number of chairmen have so advised us and Dr. Lawrence has found that it has increased the correspondence with legislators. To date we have mailed eleven regular and eight special bulletins, and we have sent ninety-eight bills to the County chairmen.

A brief résumé of the most important bills that were introduced follows:

The State Fund monopolistic bill was opposed by us. The opposition was so great that, although it was one of the Governor's recommendations, it was abandoned and later a bill was passed providing for the future guaranty of insurance funds.

The occupational disease bill, which we opposed for a number of years, was reintroduced but it also gave way to powerful opposition and was amended so as to consider as occupational diseases only those already mentioned in the law. In this form we approved it.

An amendment to the Decedent Estate Law, which has passed both houses, provides that expenses of medical aid shall be deemed a proper element of damage recoverable in actions for wrongful act or neglect.

Extension of the Temporary Emergency Relief Administration for another year has been authorized

A distribution of a portion of the bills introduced according to the laws to be amended might be interesting. Twenty-five bills to amend the Education Law, fifteen to amend the Workmen's Compensation Law, seventeen to amend the Public Welfare Law, fifteen to amend the Health Law, five to amend the Labor Law

This is the first year in which the strands of the Legislative Committee on pending legislation has had active militant editorial support, through the alert-

ness of the JOURNAL Management Committee. This Committee desires to register its appreciation, and to recommend that the practice inaugurated this year shall be continued.

We again want to express our grateful appreciation of the hearty co-operation we have received from a majority of the County clurmen and the officers of the State Society.

This report will be completed by a supplementary statement after the adjournment of the Legislature.

Respectfully submitted,

HARRY ARANOW, *Chairman*

April 1, 1935

REPORT OF COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION

To the House of Delegates, Gentlemen

Your Committee on Public Health and Medical Education begs leave to submit the following report for the current year.

In the hope that a large number of the members of the Society will read this report and discuss with their delegates, the subjects which are presented, the report has been made as brief as possible. In a general way the report follows the form of the previous annual reports from this Committee. The relative position of the various subjects is no indication of their importance.

Graduate Education

The following table is a report of the graduate courses which either have been given or will be given by the State Society for County medical societies during the current year.

Cayuga County	Internal Medicine
Chemung County	Malignant Disease
Clinton County	Internal Medicine
*Cortland County	Internal Medicine
Franklin County	Internal Medicine
Herkimer County	Internal Medicine
Jefferson County	Internal Medicine
Madison County	Internal Medicine
*Monroe County	Internal Medicine
Montgomery County	Internal Medicine
*Onondaga County	Internal Medicine
*Orange County	Pediatrics
*Rockland County	Pediatrics
St. Lawrence County	Internal Medicine
Steuben County	Internal Medicine
*Sullivan County	Physical Therapy
Tioga County	Internal Medicine

*An asterisk before the County indicates that the course has been completed.

Two lectures in the Orange County course were given previous to July 1, 1934.

Plans for all the above courses have not been definitely completed, so that there may be some change in the above schedule, although it is expected that it will be completed as given. Chemung, Jefferson St. Lawrence, and Sullivan County Medical Societies continue their record of having had a course each year since this work has been started by the State Medical Society. With the exception of four Counties, all County medical societies having courses this year, had courses last year and most of these have had courses annually for several years.

Three new courses have been added to the Committee's curriculum. Two of these are courses in Internal Medicine, and one in Pediatrics. The Committee is indebted to Dr. John Wyckoff, Dean of New York University and Bellevue Hospital Medical College, Dr. William S. Ladd, Associate Dean of Cornell University Medical College, and Dr. Charles Hendee Smith of New York City for their co-operation in planning these new courses. All of these courses have been given this year, and have proven highly satisfactory. This has been indicated particularly by the requests to have these courses repeated in other countries.

The Committee has no particular comment to make regarding graduate education at this time. This subject has been extensively discussed in its previous re-

ports. What has been said before still applies. Graduate education is continually receiving greater attention from all State medical societies. The work which has been done in New York State, is well known with the result that our advice is being frequently sought by others who are initiating this work. During the past year such advice has been requested by the Illinois State Dental Society, which is apparently the first State organization in that profession to undertake this work. At the annual conference of Secretaries of Constituent State Medical Associations of the American Medical Association in Chicago in September, 1934, Dr. C. L. Cummer, president of the Ohio State Medical Association, in a paper entitled "Educational Possibilities of Scientific Programs in State and County Meetings," spoke in approval of the plan of our State Society. A very close association has existed between the committees directing this work in the Massachusetts State Medical Society, and our own State Society. Tables have been prepared covering the work of this Committee in graduate education for several years, and will be offered for publication in the JOURNAL very shortly.

Public Health

The Committee on Public Health and Medical Education has been very active during the past year in the consideration of public health matters. Its major attention has been directed towards Child Hygiene, Maternal Welfare, Pneumonia, Standing Orders for Public Health Nurses, Nursing Education, and the general subject of interesting the physician in an active participation in the field of preventive medicine. For the purpose of studying these subjects, sub-committees have been appointed as follows:

Child Hygiene: Dr. Fairfax Hall, Professional Bldg., New Rochelle, N. Y., Chairman; Dr. Leo F. Schiff, Plattsburg, and Dr. O. W. H. Mitchell, Syracuse.

Maternal Welfare: Dr. James K. Quigley, 26 S. Goodman St., Rochester, N. Y., Chairman; Dr. Martin B. Tinker, Ithaca.

Pneumonia: Dr. Russell L. Cecil, 33 E. 61st St., New York City, Chairman; Dr. Clayton W. Greene, Buffalo, and Dr. O. W. H. Mitchell, Syracuse.

Standing Orders for Public Health Nurses: Dr. Edward G. Whipple, 277 Alex-

ander St., Rochester, N. Y., Chairman; Dr. Fairfax Hall, New Rochelle, and Dr. James K. Quigley, Rochester.

Nursing Education: Dr. Clayton W. Greene, 135 Linwood Ave., Buffalo, N. Y., Chairman; Dr. Russell L. Cecil, New York City; Dr. Martin B. Tinker, Ithaca; Dr. O. W. H. Mitchell, Syracuse; and Dr. Peter Irving, New York City. (At the request of the Committee, the Executive Committee designated Dr. Irving to serve on this sub-committee.)

Preventive Medicine: Dr. O. W. H. Mitchell, 307 S. McBride St., Syracuse, N. Y., Chairman; Dr. Clayton W. Greene, Buffalo, and Dr. Edward G. Whipple, Rochester.

Each of these sub-committees has submitted a report which has been approved by the whole Committee, and is appended herewith as a part of this report. The following comment regarding their activities describes their purposes and plans:

1. *Child Hygiene.* In June, 1934, Commissioner Parran of the State Department of Health sent a letter to the governing bodies of the ten Counties of the State showing the highest infant mortality rate during the period from 1929 to 1933. A copy of this letter was sent to the secretaries of the medical societies of the same Counties, and similar copies were sent to officials of the State Medical Society. At the request of the President of the State Medical Society, Dr. Arthur J. Bedell, our Committee was directed to study this matter. The sub-committee on this subject has made an extensive study of the matter of infant mortality throughout the State, with special attention to the ten Counties particularly referred to. The Committee has placed the material gathered as a result of its study at the disposal of the ten County medical societies, and has offered its assistance in any effort which the County societies make to reduce infant mortality rates in their particular Counties. In its letter to the County medical societies, the sub-committee made the following statement: "Because of the many factors involved, such as social, economic and racial, it is not to be expected that the rates will be the same in all the Counties. These differences should be determined, and every effort made to ascertain the causes of deaths which could have been prevented." The title of this sub-committee has been changed to the sub-committee on Child Hygiene, and it proposes to make its facilities available to all County medical societies in a broader respect.

2. *Maternal Welfare.* The sub-committee

on Maternal Welfare is continuing the work which was outlined in our last annual report. Our Committee has been asked by the National Maternal Welfare Committee to represent it in New York State, and has agreed to so do. The Executive Committee has been requested to approve this action. The National Maternal Welfare Committee is a joint Committee representing the American Child Health Association, the American Association of Obstetricians and Gynecologists, and the American Gynecological Society. Its plans and purposes are similar to those undertaken by the maternal welfare committees of some of the State medical societies, notably that in New Jersey. It is anxious that it have as its representative in each State the proper committee of the State medical society. The work which the Committee on Public Health's sub-committee on Maternal Welfare is doing corresponds to the plans and purposes of the National Maternal Welfare Committee. Therefore, it would seem highly desirable that the Committee act as the representative in New York State for the National Maternal Welfare Committee. A letter has been sent to all County medical society officials of the State, requesting that they appoint committees to handle this problem in their own County societies. Replies so far received from twenty-five County societies indicate that Maternal Welfare Commissions have been active in four County societies. Twelve County societies have appointed such Commissions, following the receipt of the above mentioned letter. The other nine County societies have promised to give this matter their immediate attention.

3. *Pneumonia.* At a meeting of the Public Relations Committee on December 13, 1934, the matter of pneumonia mortality was discussed with representatives of the Metropolitan Life Insurance Company, who reported on the lack of nursing care in these cases. The Public Relations Committee appointed a sub-committee to study this matter, and asked that a similar sub-committee be appointed by the Committee on Public Health and Medical Education. It was soon apparent that this topic was wholly a public health matter, and the sub-committee from the Committee on Public Health and Medical Education was asked to assume entire charge of the subject. The sub-committee feels that its attention should be directed towards all phases of the pneumonia problem, and that an energetic campaign should be waged in this State for the control of the disease. It has already made progress in its co-operative efforts with Commissioner Parran, so that an additional appropriation has been

made to the State Department of Health, to provide for the distribution of the newer concentrated pneumonia serum. The Committee on Public Health and Medical Education feels that a campaign to control pneumonia should be directed by the State Medical Society through its Committee on Public Health and Medical Education. It may need the assistance of co-operative groups on an advisory committee, and requests permission from the House of Delegates for the appointment of such a group. An educational exhibit regarding pneumonia will be sponsored by the Committee at the State Society's annual meeting.

4. *Standing Orders for Public Health Nurses.* The need for Standing Orders for Public Health Nurses is apparent. Each County medical society should adopt its own set of orders. Many County medical societies have already done so. In order to aid such County societies as have not already done so, the sub-committee in its report has set forth such a code. It should be definitely understood that this code does not replace any already adopted by any County medical society.

5. *Nursing Education.* The question of changes in nursing education were reported upon in our last report, and the sub-committee to study this subject has made an extensive study with recommendations included in their report. Your attention is directed to the fact that while the State Department of Education had considered its plans for changes in nursing education with various groups, it had not considered these suggested changes with any representative group of the medical profession, until this Committee was asked to study this problem.

6. *Preventive Medicine.* The sub-committee to formulate a plan regarding preventive medicine has submitted no report. It has been felt that until some of the other activities of the Committee were further advanced, it would be unwise to do anything with this subject. Furthermore, work more or less along these lines has been started by several County medical societies, notably Albany, Nassau, and Westchester Counties. During the coming year, the experiences of these societies can be made available to other Counties, and efforts made to initiate in their Counties similar activities. The Committee has in mind a well-developed educational program, to be carried on through the JOURNAL, in the field of preventive medicine.

The Committee continues to take a general interest in the subjects of tuberculosis, cancer, venereal diseases, and

arthritis. It has no definite report to make regarding these subjects at this time. The joint sub-committee on the Deaf and Hard-of-Hearing, which represents the Public Relations Committee and this Committee, is continuing its study, and will make a separate report. This sub-committee is planning an exhibit at the annual meeting of the State Society, and permission has been requested that one of its members, Dr. Fairfax Hall, discuss the work of this sub-committee in the Section on Pediatrics.

Report of Sub-Committee on Child Hygiene

Your sub-committee on Child Hygiene in November wrote letters to the secretaries of the medical societies of the ten Counties of the State having the highest infant mortality, suggesting that these County societies take some action to improve health conditions amongst infants in their Counties. An analysis of the infant mortality of these Counties was enclosed together with an outline of procedure tending to lower infant mortality. It was stated that a representative from this Committee would, upon request, meet with them to discuss this matter. Dr. Schiff attended a meeting of the Franklin County Society for discussion of this subject. Dr. Mitchell attended a meeting of Chenango County. No replies have been received from these Counties regarding this matter.

The sub-committee has asked Dr. Parran of the State Department of Health to supply us with information on all matters pertaining to child hygiene. Dr. Parran replied that he would co-operate to the fullest extent and has asked Dr. Elizabeth M. Gardiner and Dr. J. V. DePorte to report all new developments concerning infants and young children. He stated that the Department had under consideration infant mortality surveys in St. Lawrence, Clinton, and Warren Counties to be taken up in co-operation with the County Societies. He said that if the Wagner Bill is passed there will be many questions of policy and procedure in regard to child health which he will wish to take up with this Committee.

There are several matters relating to child health which may be well considered by this sub-committee at this time for

recommendations as to action in the future.

FAIRFAX HALL, *Chairman*

Report of Sub-Committee on Maternal Welfare

The sub-committee on Maternal Welfare believes that Maternal Welfare Committees should be organized in County Societies throughout the State where none exist at present. The function of such committees shall be to make a study of the facilities for maternity care in each County including prenatal and natal care, to study the maternal mortality in each County, and after such studies to attempt to improve local conditions by education of the public and by placing the seriousness of the situation before the medical profession in the effort to secure their co-operation to better conditions.

This move seems necessary in view of the last annual report on maternal mortality from the State Department of Health which showed that while the mortality rate for the State as a whole was no worse than the national rate, nevertheless it might be improved and in addition it showed an unusually high death rate for the maternal state in some Counties.

Committees on Maternal Welfare are operating in some County societies and it is hoped that the results will equal those in New Jersey where such work has been carried on for several years. In addition the State Society has been asked by the National Committee on Maternal Welfare, a very representative group, to co-operate in this work and appoint a representative to serve on the National Committee.

JAMES K. QUIGLEY, *Chairman*

Report of Sub-Committee on Pneumonia

As chairman of your sub-committee on Pneumonia, I beg to make the following report:

At the first meeting of this committee, we decided to focus our efforts on two immediate goals.

First, to put on a scientific exhibit at the New York State Medical Society meeting in Albany this Spring. In this exhibit we propose to show by charts, movies, and laboratory demonstrations,

the recent advances in the diagnosis and treatment of pneumonia, stressing particularly bacteriology and serum treatment. Dr. Parran has very kindly consented to have the laboratory work done by the New York Public Health Laboratory in Albany.

Second. Our other immediate objective has been to arrange for an adequate supply of concentrated serum to be prepared by Dr. Wadsworth in the New York State Health Department's laboratory at Albany. Governor Lehman has recommended an additional appropriation of \$25,000 for the preparation and distribution of this serum.

In the Fall your sub-committee proposes to take up other phases of the question, such as a publicity campaign to doctors, nurses, and the public on the prevention and treatment of pneumonia, training of laboratory technicians in the modern methods of typing, and close co-operation with a similar pneumonia campaign which is to be conducted by Commissioner Rice in New York City in conjunction with the medical societies of the five boroughs of greater New York.

RUSSELL L. CECIL, *Chairman*

Report of Sub-Committee on Standing Orders for Public Health Nurses

The daily routine of public health nurses, visiting nurses and school nurses continually brings them in contact with individuals needing nursing care and advice. It is highly important that such care and advice be consistent with the consensus of medical opinion of the community, and for this reason, it is suggested that each County medical society adopt certain standing orders for the guidance of these nurses. The following are submitted by the Medical Society of the State of New York with the suggestion that they be approved by the various County medical societies, with such changes as may be in their opinion advisable as standing orders for the guidance of public health, school, and visiting nurses, which have not already adopted such a code of Standing Orders for this purpose. It is recommended that the Medical Society of the State of New York approve of these Standing Orders for the guidance of the work of such nurses in Counties which fail to set

up a code of their own or until they do so.

The services of the Public Health Nurse are considered under two headings: (1) Nursing Care, (2) Health Education. In general, it may be said that it would be a rare occasion when the Public Health Nurse gives nursing care without giving, verbally or by demonstration, education in the field of prevention of the condition which she meets. Administration of relief is not considered here. *All new patients should have pulse, temperature, and respiration recorded, and be given such bedside care as seems necessary.*

Most of the conditions met by the public health nurse where treatment may be given on the first visit, based upon standing orders from the physician, are given below.

Emergencies and Accidents; Nursing Care. This should be well covered by the first aid training of a Public Health Nurse, and executed accordingly. Only first aid should be given and immediate contact should be made with the attending or family physician or headquarters. In the event of a severe accident the nearest physician or hospital should be called, and the attending or family physician be notified of the disposal of the case. Subsequent nursing care should be carried out on the instructions of a physician or Public Health official.

Health Education. Little can be done on the first visit. Accident prevention can be emphasized later.

Elevated Temperature; Nursing Care. Put patient to bed. Give tepid sponge bath if patient is restless or markedly uncomfortable, liquid diet.

Health Education. None at this time.

Abdominal Pain (with or without diarrhea or constipation); *Nursing Care.* Put patient to bed, nothing by mouth, other than sips of water. No medicine, cathartics, or enema until ordered by physician. Make immediate contact with physician or local relief agencies, especially if fever is present.

Health Education. Emphasis of above.

Communicable Diseases; Nursing Care. If communicable disease is suspected, so inform family. Isolate the patient. If the family cannot afford the services of a physician the nurse should notify the Health Officer at once.

Health Education. Emphasis on the necessity of above. All sore throats should be considered as possible communicable diseases. The nurse should follow the

regulations of the Health Department as a guide to the advice she gives regarding isolation and quarantine. She should give instruction to the attendant regarding the care of patient and prevention of contacts.

Colds; Nursing Care. If fever is present put patient to bed and notify physician. If no fever, advise patient regarding the infectious nature of a cold and use usual methods for isolation and disposal of secretions as prescribed by local or state health authorities.

Health Education. Instruction regarding infectious nature and disposal of secretions and the importance of sequelae.

Tuberculosis; Nursing Care. Usual bedside care with special care to secretions and excretions.

Health Education. Patients suffering from tuberculosis should always be under the care of a physician, but they often report to him at long intervals. The nurse will be guided by the physician's advice regarding sanatorium care. Where there is no private physician, the clinic or health officer should be consulted. In the absence of special orders the nurse should give periodic supervision, giving advice regarding accepted standards of hygiene for tuberculosis patients, stressing rest, diet, fresh air, care of sputum, and protection for the contacts including regular physical examination particularly for children.

Pulmonary Hemorrhage; Nursing Care. Notify physician. Reassure patient. Demand complete rest, ice bag to chest. Await physician's orders for further treatment.

Health Education. None at this time.

Ear Ache or Discharging Ears; Nursing Care. None other than to seek medical supervision.

Health Education. Instruction regarding disposal of secretions and importance of medical care.

Inflammatory Condition of Eyes or Eyelids; Nursing Care. None other than to isolate and seek medical care at once.

Health Education. Instruct regarding possibility of dangerous consequences connected with inflammation of eyes or eyelids and of possibility of its infectiousness.

Surface Injuries or Infections; Nursing Care. Dressings for minor injuries or surface infections. Cleanse with soap and water and apply iodine if the injury is fresh. Cover injury or infection with a loose sterile dressing and seek medical attention.

Health Education. Instruct regarding the serious possibilities of any superficial or deep wound or infection.

Burns; Nursing Care. Remove clothing over burn if not attached to skin; if ad-

herent, cut clothing away. If burn is of first degree, apply sodium bicarbonate solution and exclude air by dressing, and seek medical advice. *Do not apply oil or any greasy substance.* If burn is of second or third degree, use only sterile dressing and seek immediate medical care.

Prenatal Visits; Nursing Care. Little is required other than routine nursing care. The importance of this visit is:

Health Education. All expectant mothers should be under medical supervision, and the importance of this should be emphasized by the nurse. Routine instruction in personal hygiene, including habits of living, importance of fresh air, sleep, rest, exercise, baths, dress, diet, and recreation are important. In follow up calls, it is advisable to take pulse and temperature readings and to have recorded routine urinalyses and blood pressure readings. Special advice regarding the care of the nipples should be given after the sixth month of pregnancy. Advice regarding layettes and other supplies may be given. A report of each prenatal visit should be sent to physician in charge of case, and any adverse symptoms should be reported to him immediately.

Maternity Care; Nursing Care. While awaiting the physician: (1) Arrange bed for right hand delivery; (2) arrange room and patient's supplies; (3) see that there is a supply of hot and cold sterile water; (4) if labor has not progressed too far give low soap enema (1 pint); (5) clip or shave pubic hair; (6) cleanse external genitals with soap and water.

If baby is born before the doctor arrives, the nurse should, pending the arrival of the physician: (1) Clamp and cut the cord, making sure that enough is left for the physician to tie; (2) see that respiration is well established; (3) Keep baby well wrapped and warm; (4) cleanse the eyes with boric acid and put one per cent silver nitrate solution in each eye; (5) hold the fundus of the uterus for 30 minutes; (6) in case the placenta is not expelled and hemorrhage occurs express the placenta by the Credé method. Keep mother warm and quiet until physician arrives to assume responsibility for mother and baby.

Post Partum and New Born Care. If the physician is in attendance get orders from him. If no physician in attendance proceed as follows:

Nursing Care; Post Partum Hemorrhage. In the event of post partum hemorrhage: (1) Attempt to hold the fundus of uterus firmly between the fingers; (2) send immediately for family physician, and if unable to reach him call nearest physician;

(3) elevate foot of bed; (4) apply ice pack to abdomen.

Usual Post Partum Care. Record temperature, pulse, and respiration, give cleansing bath, give perineal irrigation of sterile normal salt with boiled water or boric acid solution, cleanse nipples before and after nursing with boiled water or boric acid solution. Apply sterile mineral oil to nipples and cover with sterile oil paper. If breasts are engorged, apply supporting binder. Usual attention to bowels and bladder. Get special instruction for sore or cracked nipples.

New Born Care. Record temperature, pulse and respiration, give cleansing bath, change outer cord dressing if soiled, cleanse genitals with mineral oil and oil all creases in body, record weight, prepare separate bed for baby so that proper temperature may be maintained. If premature, or under five pounds in weight, or in poor condition, do not give usual bath, but cleanse with warm oil. Keep baby warm and avoid unnecessary handling.

Inflamed Eyes. Notify physician or responsible authority at once.

Bleeding from Cord. Tie tightly and securely with sterile tape, apply sterile dressing and tight binder. Watch for further bleeding, notify physician.

Protruding Umbilicus. If umbilicus is clean and dry, make deep vertical fold of skin and apply tight adhesive $1\frac{1}{2}$ inches wide.

Diarrhea. Urge complete rest, discontinue all feeding, give plain boiled water, notify physician.

Excoriated Buttocks. Cleanse with oil, instruct mother regarding care of child and diaper.

Convulsions. Send for physician at once, undress child, and move as little as possible, give warm (105° F.) mustard bath (1 teaspoonful of mustard dissolved in a little tepid water to 1 gallon of warm water). If no tub is available, give hot pack. Keep cold compress to head, following bath or pack, place patient between warm blankets, and maintain absolute rest.

Health Education. Instructions regarding above naturally follow the nursing care.

School Nursing. It is only outside of metropolitan areas that the Public Health Nurse does school nursing. It may be necessary for the nurse to render first aid, but it would seem advisable to give no other nursing care or health education except on advice of school physician, family physician, or health officer. This will avoid the assumption of the responsibility of diagnosis placed upon the nurse when she treats any abnormal physical condition. The nurse

should report to the school physician any abnormality found and in the event that she observes a communicable disease, the nurse should recommend dismissal from school and that the family be notified, she should notify the family physician or the school physician of her observations and recommendations.

Child Welfare. The duties of the Public Health Nurse in reference to child welfare are entirely supervisory and educational. A general outline follows: In health supervisory visits to young infants, emphasis should be placed on breast feeding, unless the physician has left other instructions. Instructions according to accepted standards of infant care should be given regarding: (1) Establishment of regular habits of sleeping, eating, and elimination, aids to forming other desirable habits should be discussed as the need arises; (2) daily care, such as cleansing baths and sun baths, type and care of clothing; (3) fundamentals of nutrition and the need of starting such foods as orange or tomato juice and cod-liver oil in the early months of life; (4) need of taking to physician for immunization against smallpox when one year old and diphtheria when 6 months old; (5) when physical defects are present and recommendations for correction are outlined by the physician, the nurse should encourage and secure aid if necessary to carry out the physician's orders.

General. It may be said that in the course of the work a nurse will be expected to take advantage of every opportunity to give instruction regarding the procedures for the care of the sick, the prevention of disease with emphasis on the rules for the maintenance of health. Where she finds evidence of existing defects or of illness, she should use her influence to secure speedy medical or dental care. She should always be most careful neither to diagnose nor to recommend treatment of any kind; nor should she ever suggest a particular physician, even though the patient has no regular one and asks her advice.

EDWARD G. WHIPPLE, *Chairman*

Report of Sub-Committee on Nursing Education

Your committee was asked to study the "Suggested Remedial Measures" recently proposed by the New York State Education Department designed to improve the nursing situation within the State. Members of the committee attended several conferences, including one of all the nurses of the metropolitan district called to discuss these same measures, and the

annual meeting of the New York State Nurses Association. A conference was held with Dr. Horner, Assistant Commissioner for Higher Education, who is the author of the suggested remedies.

It is apparent to all that a situation has arisen in the nursing profession which works hardship for the nurses and the community. There has been an overproduction of "trained nurses" and a consequent undue increase in the registered nurses within the State. The training of many of these has not been of the best. The number of unlicensed nurses, many of them coming from other States, likewise has increased. With the deepening of the economic depression there is a great surplus of nurses above the demand and many of the nurses, both licensed and unlicensed, are in dire straits.

Undoubtedly in the past there have been too many training schools, and too many nurses have been graduated. The comprehensive report of the Committee on the Grading of Nursing Schools shows that since 1920 the number of trained nurses in the United States has risen rapidly while the number of untrained nurses has maintained a steady level. One of the remedies suggested is that a moratorium be declared on admission of students to training schools until September, 1936. The wisdom of this is doubtful. Many hospitals would be greatly handicapped should such a rule be enforced and such prohibition of opportunity would not be fair to the oncoming generation of young women. Whereas the training schools have saved money for some hospitals in furnishing care of the sick, such has been by no means universally the case. In the better hospitals, in recent years, at least, the training schools have been conducted at a financial loss. Various factors are operating to help the situation. Numerous smaller training schools are being closed voluntarily; the number of applicants for nurse training has fallen off sharply; and many hospitals have greatly increased the proportion of their work done by graduate nurses on general duty.

The proposal that a year of college work be required of all candidates for "R. N." is open to question. Over-training leads to fatal inefficiency in the essential qualities so necessary in the

nurse on duty. Nursing is as yet an art based on certain sciences and your committee feels that the best training is to be obtained in the presence of sickness.

The matter of the trained attendant and the practical nurse presents a problem. The needs of the patient may be widely varied. He may require only a purely household helper giving attention to an invalid or convalescent such as any maid could render, or he may need the most skilled and competent service a nurse can perform. To meet such needs, different degrees of training are required. The present provision in the law is inadequate, and revision is in order. It has been found well-nigh impossible to define the practical nurse.

Dr. Horner has done us all a service by calling attention to the plight of the graduate nurses and the present situation in nursing education. The New York State Education Department plans to continue its consideration of these matters and appears to desire the co-operation of this Society in formulating remedial measures. If it is your wish, your committee will continue its study of the entire question.

CLAYTON W. GREENE, *Chairman*

Recommendations

The Committee is anxious to have the House of Delegates express itself particularly on the following matters.

It is recommended that the sub-committee on Child Hygiene be continued and that this sub-committee study and investigate all phases of this subject, and that it continue its efforts to interest County medical societies in assuming leadership in the efforts to reduce infant mortality in their particular Counties, and to have the individual physician participate more actively in this work.

It is recommended that the Committee on Public Health and Medical Education be designated as the New York State representative of the National Maternal Welfare Committee, and that the sub-committee on Maternal Welfare continue its efforts to organize Maternal Welfare Commissions in every County medical society for the purpose of assuming leadership in this activity.

It is recommended that the House of Delegates approve of a campaign to re-

duce the mortality from pneumonia to be conducted by the State Medical Society through its Committee on Public Health and Medical Education and that this campaign consider all phases of the pneumonia problem, including medical treatment, distribution of serum, laboratory facilities, nursing care, and the education of the public. It is recommended that the direction of this work be wholly in control of the State Medical Society, through its Committee on Public Health and Medical Education, but that the co-operation of all interested groups be secured, and an advisory committee representing these groups be appointed by the Committee on Public Health and Medical Education.

It is recommended that the sub-committee on Nursing Education be asked to continue its general study of this question, without any power to take any action.

General Comment

The annual appropriation made to the Committee on Public Health and Medical Education has been reduced each year for the last successive three years. Despite this fact, the Committee is carrying on the same program of graduate education, and is doing more work in the field of public health. It has utilized every possible means of economy in carrying on its work. Much of the work of the Committee has been done by sub-committees in order to reduce expenses, and at the same time to increase efficiency. The Committee has held three general meetings. Most of the meetings of the Committee and its sub-committees have been held on Saturdays, in order to take advantage of the lower week-end railroad fares. The Committee has requested the assurance from the Executive Committee of slight additional funds if necessary to complete this year's program.

The activity of the Committee on Public Health and Medical Education has

an important bearing on the changes being suggested in medical practice by certain groups at the present time. The annual reports of this Committee show that the State Medical Society has interested itself in the continual education of the physician and the improvement of medical practice, long before these other groups had even considered these questions. At the present time, non-medical groups are very active in their efforts to expand governmental public health work. Your Committee has taken the view that future health programs must be concerned more and more with the individual practicing physician, and believes that capable governmental public health officials realize this, and are anxious to co-operate in the proper way with the medical profession in accomplishing this. The Committee on Public Health and Medical Education is prepared to offer its services along these lines to the County medical societies. The greatest weakness in such programs is the lack of well-organized committees in the local County societies, to take advantage of the services which this Committee can offer.

The Committee expresses its appreciation of the co-operation received from the President and the other officers of the State Society during the present year, as well as of the services rendered by the very many interested physicians throughout the State. Most harmonious relations have existed between the other Standing Committees and this Committee. The Chairman wishes to acknowledge the unselfish service of all the members of the Committee who have actively participated in its efforts, and who have attended all meetings of the Committee except in a few instances when unavoidably detained by illness or some other equally justifiable reason.

Respectfully submitted,

THOMAS P. FARMER *Chairman*

April 1, 1935

REPORT OF COMMITTEE ON ECONOMICS

To the House of Delegates, Gentlemen

Your Committee on Economics herewith submits a report of its activities and events of economic interests for the year. Of particular significance are

1 Survey of laws regulating public and

semi-public medical care "TERA"

2 Epstein Bill Compulsory Sickness Insurance "Will America Copy Germany's Mistakes?"—Hartz

3 Workmen's Compensation

4 Preliminary draft of "planned

changes for a program of medical care for New York State."

5. Conference with Hospital Association: continued.

6. Visit of Metropolitan Medical Economists to Philadelphia.

7. "Eastern Interstate Medical Economics Conference," first meeting.

8. Extended application of the Vaughan plan.

9. Meeting the expense of medical care through Financed Credit.

10. Rationalized insurance for sick-care expense.

11. "A New Deal" in Philanthropy.

12. Contacts with other groups.

13. Cost Analysis (Medical Practice).

14. Survey of positions for physicians in the public service; State, County, City.

15. Medicine in Industry. Practice of medicine by corporations: lay technicians.

16. Physicians in courts.

17. Promotion of economic thought by circulation of informative material.

18. News Bulletins: Committee minutes.

19. County Society and other public addresses.

20. The work of the Committee.

21. Acknowledgments.

Each item of this list represents days and weeks of work by the committeemen, who have served you. A reasonably detailed report would extend any one item beyond the space allotted for our full report. This abridged text is offered with full appreciation that much is left to the reader's general comprehension of the nature of the work. Supplemental material will be provided for consideration by the Reference Committee.

1. "Public and semi-public assistance for the provision of medical care in the State of New York" is regulated by fragments of law scattered through more than ten different statutes. These have been collected, briefed, and now are being circulated in a 125 page loose-leaf book: expression of opinions based on personal experience is being solicited from the field of actual application of their provisions. This study is related to comment in paragraph 4. This project should mature to a definite recommendation by September 1, 1935.

"Regulation 7" (obtainable from Tem-

porary Emergency Relief Administration, 79 Madison Avenue, N. Y. C.) is a book of general and administration data.

2. Shortly after the first copies of the Epstein Bill were released by the American Association for Social Security (the old American Association for Labor Legislation with a new name) we circulated 600 mimeo reproductions throughout the State.

Drs. Borzell and Faught directed our attention to the Hartz pamphlet—"Will America Copy Germany's Mistakes?" Through the generosity of the Pennsylvania Self Insurers' Association, we sent out 400 copies of it in January. Later, Mr. Walter Linn granted us permission for the publication, which appeared in the March 1, 1935, issue of the JOURNAL.

Epstein has become "Byrne Bill, Int. 474" in the New York State Senate. We urge every member to exercise every opportunity to educate his people to the truth about this bill.

It is obvious that the proponents are interested more in the even spread of "Jobs" and in the taxation of industry than they are in the *quality* of the medical care. A *leveled poor quality* of medical care will be a greater evil than the present unevenness of the burden of expense imposed by sickness. Compulsory Health (Sickness) Insurance "must not pass." If we must have "compulsion," let it be "compulsory saving"!

3. One provision of the proposed O'Brien "19" amendment to Workmen's Compensation Law calls for the composition of a fee schedule. We are prepared further to offer "guiding principles" if and when the County societies are required to register qualified physicians with the Commissioner of Labor. We have exchanged ideas with officials of insurance, for the purpose of finding a common ground of understanding upon which this law may be made to work more satisfactorily for all interests, workmen, employers, physicians, and "carriers." Without such foundation, no law can function smoothly.

(Since this report was written Governor Lehman signed the Amendment to the Workmen's Compensation Law—O'Brien 19. The essentials of this law amendment were originally drafted in the

report of this Committee and passed with amendment by the House of Delegates at the 1933 meeting.)

4. Certain interests and "minorities" are urging "change" in the social order. They have attempted the induction of artificial trends in substitution for the processes of natural development.

Why not meet the challenge of their ill-conceived "plans" for medical care with a program of fundamentals "for the maintenance of present standards and the further natural development and more universal application of health and medical service to all the citizens of New York?"

The Program: (a) Re-write and consolidate the laws to provide medical care with compensation of the professions, for all who cannot obtain it without public assistance; discontinue the further exploitation of the profession in the dole of free service. [1]

(b) Integrate the entire profession in the functions of "public health." [8]

(c) Establish "bureaus" for proper investigation and reasonable adjustments and diversification of expense of sick care to income and time-payment ability of those who need it. (Washington, D. C. plan.) (Pino plan.) [9]

(d) Educate those who need credit "to borrow money" on a deferred payment plan, and procure professional service on "cash" basis. Establish bank facilities for the humanities as well as for the industries of life! [9]

(e) Develop an "insurance" plan limited to meet the real financial hazards of high-cost or long-duration illnesses: and free from political implications and potentialities and the evil of lowered quality of medical care. [10]

(f) Compulsory savings for all low-wage earners. (Hartz) [2]

5. Conference of this Committee with representatives of the State Hospital Association has continued. In these informal conversational exchanges a mutual understanding has been promoted which already has led to considerable progress in the correction of certain wrongs affecting the economic welfare of medicine. It lies within the power of "hospital administration" to go far toward corrective adjustments of *methods* and *regulations* without recourse to amendment of any statute. There seems a ready willingness to meet all reasonable desires of the

profession. If the common welfare of both sides is to be attained, on the ground of harmony of economic interests, this will be found not in continued legislative conflicts, but must arise out of friendly, analytical group-thinking. Present indications foreshadow increasingly favorable results in control of "free" and "pay" clinic abuses.

6. On the evening of December 19, 1934, the Commission on Medical Economics of Philadelphia County Medical Society, at a dinner meeting, explained and demonstrated its plan of organization and activity. A Commission of 4 motivate the work of some 18 sub-sections. The plan spreads the interest, the work, and the effectiveness of the economic study to a very considerable number. Twenty physicians from 7 New York metropolitan Counties and 2 physicians from Hudson and Essex Counties, N. J., made the journey to the meeting. Kings County has adopted the organization plan and now has 120 of its members engaged in the medical economics' activities.

7. Thirty-eight physicians, including our Committee, informally representing the economic thought of the medical societies of 8 eastern States, met at Atlantic City on January 27, 1935. A day of general discussion ended in a resolution to: (a) Constitute a permanent association for further exchange of information and opinions in medical economics; and to (b) facilitate composition of united regional strategy and action: and thus amplify the purposes of competent authorities of respective States, and the American Medical Association.

The "Eastern Interstate Medical Economics Conference" lays the foundation for a better regional or "neighboring-state" co-operation, founded upon closer acquaintance and mutual good will. Address: Dr. F. F. Borzell, Secretary, 4940 Penn Street, Frankford, Philadelphia, Pa.

This Conference came about through the pre-existing cordial relations among Dr. Thomas Lewis, Chairman of the Committee on Medical Practice, New Jersey; Dr. Francis Faught, Chair. Commission on Medical Economics, Philadelphia County; Dr. F. F. Borzell, Chair. Economics Committee, Pennsylvania; and Dr. Fred Elliott of the New York State

Committee on Economics. Tangible benefits have accrued from this informal group unity.

8. The Vaughan plan of Public Health administration and organization to integrate all practicing physicians in the program, with compensation for them, and the substitution for Health Department Clinics of "Public Health Hours" in the offices of private physicians, has been approved by the State Society. Local County initiative must assume the responsibility of urging the extended adoption of this plan. Commissioner Rice of New York City is reported interested in a test of the plan in one area of the City, and only awaits available funds.

9. Credit and its function, applied to the provision of medical care, has developed more evils than good. This Committee sounded the opinion of more than a hundred representative County and State Society officers with prepared statements on "Meeting the Expense of Medical Care" and "Financed Credit."

At its December, 1934, meeting, the Council endorsed, for the Medical Society of the State of New York, "the principle of periodic payment of the expense of medical care out of income, through established, accredited agencies." This Committee at present, by instruction of the Council, is engaged in discussion with banking interests, toward the development of a plan to be submitted to the Executive Committee when completed. (See 4) [Cf. the JOURNAL, April 15, 1933, "Financing Sickness."]

Dr. Pino in Detroit and Ross Garrett in Washington, D. C., direct successful bureau-service to public and professions, largely with employer's co-operation.

"Credit and debt" should not be permitted to build an impassable barrier between physician and patient.

10. The Thomas Thompson Fund, Brattleboro, Vt., has demonstrated that insurance—which leaves procurement of service to the choice and arrangement of the insured, and which merely provides reimbursement for expense in excess of an initial fixed sum which must be met by the insured—does eliminate malingering and waste due to exaggerated trivialities, does provide security against the major financial hazards of sickness, and

is workable to the satisfaction of both the public and the professions. Combined, this principle of insurance with legal provision of prompt, adequate care for the *public wards* (destitute) (1), Financed Credit and deferred payments (Washington, D. C. and Pino plans) (9), and Compulsory Savings (2), a well rounded program for the provision of professional care of all the people of the State, with fairness and equity to all, is complete. (4)

11. Co-operating with our neighbors in Philadelphia and with the Pennsylvania, New Jersey, Indiana, Ohio and Michigan and other State Societies, the point-of-view of medicine has been made clear to certain Directors of well-known Foundations. Assurance has been received that financial and other support of such radical proposals as compulsory health insurance will not continue.

12. We believe it should be within the privilege, and, in fact, a definite function of this Committee to establish acquaintances with representatives of other similarly responsible and important organizations and groups.

13. The study and analysis of the "costs" incident to the maintenance of medical practice has not progressed beyond a considerable investigation and discussion of *method*. In February we reported to the Executive Committee "that the gathering of experience data from a sufficient number of physicians from which to draw dependable conclusions would cost in the neighborhood of four to five thousand dollars." Our budget of \$1,000, therefore, was inadequate. Upon our recommendation we were instructed by the Executive Committee not to proceed with the work until the House of Delegates could have the opportunity to further consider it.

Your Committee is of the opinion that the tangible benefits to be gained from such study probably do not justify the expenditure of the larger sum at this time. No part of the budget allowance of \$1,000 for this project was spent. Therefore, we now recommend the indefinite postponement of this study.

14. A sub-committee (Drs. Garen and O'Gorman) has begun the listing of all positions of a public or semi-public char-

acter, part or full time, which are or should be held by graduates of medicine, in the State, County, and City administrations. Pertinent details will be collected and tabulated. Probable maturity of this project: July 1, 1935.

15. The study of "medicine in industry" has been continued, but there are no details or recommendations for current report.

The sub-committee (Drs. Watson and Vogt) is compiling now a list of medical positions and opportunities in the industrial field.

Activity on "practice of medicine by corporation" has been toward the accumulation of further information. The New York Society of A.M.A. Approved Roentgenologists are preparing to test the Medical Practice Act regarding the legal status of lay technicians believed to be engaged in the practice of Roentgenology, by suing in the courts for an injunction.

16. Dean Charles K. Burdick, Cornell Law School, Ithaca, N. Y., has been appointed Chairman of a "Law Revision Commission" by Governor Lehman. Constructive criticisms and comments on the relation of physicians to court procedures should be addressed to him.

The Civil Practice Act has been amended (N. Y. Supplement, May 15, 1934, No. 5) to exempt physicians from the subpoena of an attorney, when medical services have been rendered in "a hospital, dispensary, or other charitable institution." Testimony may be taken by referee; except that when a copy of an order by the Court, where action is pending, is served with the subpoena, then the physician's attendance upon the trial is required.

17. We have undertaken to stimulate *economic thinking* by the circulation of reprints and other matter on general as well as medical economic topics, among which are the following:

(a) 200 books on "laws" (our own).

(b) A Study of Contract Practice and Dispensary Abuse—New Jersey.

(c) Four different discussions on "Meeting the Cost of Medical Care, Expense, Financed Credit" and "A Medical-care and Health Program for a Democratic State" (our own).

(d) The Epstein Bill—18 pages.

(e) Colorado State Resolutions on the control of the dole of free medical care.

(f) "The Basis of Recovery," an address of Dr. Virgil Jordan; through generosity of National Industrial Conference Board, Inc.

(g) "Will America Copy Germany's Mistakes?" by Hartz; through generosity of Pennsylvania Self Insurers' Association.

(h) Resolutions and Declarations for Economic Recovery—National Association of Manufacturers; through generosity of the Association.

18. Each month we have dispatched a News Bulletin to the officers of each County society, chairmen of local economics committees, officers of the State Medical Society, and others who have co-operated actively with the work in hand. (The wish for such was expressly voiced at the annual meeting of the County Secretaries at Albany in September.) The JOURNAL and minutes of our own Committee meetings have kept the County Societies informed of our activities. We believe these have been well worth the expense and effort.

19. The Committee has fulfilled its duties whenever called upon for "Economics" in the County Society programs and at the District Branch meetings. Since the establishment of the Public Relations Bureau, it has been our policy to accept invitations for public (lay audience) appearance only in co-operation with and subject to their authority and advice.

The Committee has held seven all-day sessions, supplemented by active correspondence. Each member has given generously of his time and effort to sub-committee details.

20. The volume of our work may be inferred from these statistics: Mimeographed material—25,000 pages in 200 loose-leaf books; 36,000 pages in some 40 circulars. More than 2,000 individual letters in answer to inquiries and in the other correspondence incidental to the furtherance of our Committee projects.

21. *Acknowledgments:* In the study of hospital economic problems the Committee has enjoyed the valuable assistance of Mr. L. M. Arrowsmith, Mr. S. L. Butler, Dr. T. D. Buchanan, Dr. C. H. Goodrich, Dr. C. A. Gordon, Dr. C. G. Heyd, Dr. R. Kovacs, Dr. H. M. Her-

ring, Dr. M. Lederer, Dr. F. MacCurdy, Dr. W. J. MacNeal, Mr. C. Norris, Dr. M. M. Pomeranz and Dr. T. D. Sloan, who have served on special sub-committees.

In the past reports of this Committee it has been customary to enumerate the regularly received bulletins and journals. This year these have come in such number that space does not permit individual enumeration. We have read them all with profit. The wide range spirit of co-operation in this field of medical rela-

tions augurs well for the future.

Respectfully submitted,
 FREDERIC E. ELLIOTT, *Chairman*
 JOSEPH P. GAREN
 FREDERICK M. MILLER
 JOSEPH C. O'GORMAN
 ALFRED E. SHIPLEY
 TERRY M. TOWNSEND
 GEORGE C. VOGT
 CASSIUS H. WATSON
 EDWARD T. WENTWORTH
 FREDERICK S. WETHERELL

April 1, 1935

REPORT OF COMMITTEE ON ARRANGEMENTS

To the House of Delegates; Gentlemen:

Your Committee on Arrangements for the Albany meeting of the Medical Society of the State of New York has secured the use of the State Capitol for the scientific meeting place. All the sections will be under one roof, and on two floors, easy of access. This includes the Senate and Assembly Chambers. The rooms are all large, and it would be possible to take care of an extraordinary meeting. The Assembly Chamber will be used on Tuesday and Wednesday afternoons for the general sessions.

Meeting of the House of Delegates will be called at 10:00 A.M., Monday, May 13, 1935, at the Hotel Ten Eyck, the headquarters of the Society. The Technical and Scientific exhibits will be at the Ten Eyck. The Delegates dinner will be held at that hotel on Monday evening.

The Annual Dinner of the Society will be held at the Ten Eyck on Tuesday evening. Dr. Arthur J. Bedell, President of the Society, will preside. Governor Herbert H. Lehman has signified his intention to be present, if he is within the State. The Mayor of the City of Albany will welcome the Society. Dr. Walter L.

Bierring, President of the American Medical Association, will be present. Dr. Olin West, Secretary of the Association, will also be present, as will the Presidents of the State Societies of the surrounding States. A nationally known after-dinner speaker with a message will address us.

It is earnestly hoped that reservations for the Annual Dinner will be made as early as possible, so that your committee will know how many to provide for. Those wishing table reservations for their own parties will be accommodated in the order in which such reservations are received. Tickets will be \$3. Dr. Edgar A. VanderVeer, 28 Eagle Street, Albany, N. Y., the Chairman of the Dinner Committee, will have charge of the reservations and tickets.

There will be ample hotel accommodations for all.

The Ladies will be specially entertained by the newly organized Ladies Auxiliary of the Albany County Medical Society, in conjunction with your Committee.

Respectfully submitted,
 FREDERIC C. CONWAY, *Chairman*
 April 1, 1935

REPORT OF COMMITTEE ON PUBLIC RELATIONS

To the House of Delegates; Gentlemen:

Your Committee on Public Relations has met eight times during the present fiscal year in an endeavor to plan its activities and care for the various maladjustments that seem to develop between medicine and those other agencies, lay and governmental, that are actively interested in health matters.

All members of the Committee have given liberally of their time and been

most enthusiastic in developing the plans and policies of the Committee to endeavor to place organized medicine in its normal position of leading in the activities that have to do with the health of the people of the State. The work of this Committee consists of conferences and discussions with other State-wide groups working in the domain of health and in activating our County medical societies, especially their public relations com-

mittees, to function and carry on the activities in their respective Counties.

The experience of the Committee on Public Relations for the last seven years shows that the best way to work out problems between the profession and official and unofficial agencies is by conference and open-mindedness. The use of this method has usually resulted in a satisfactory understanding. The Committee has always been met at least half-way in conferences with departments of the State government and voluntary agencies. The Committee believes that a spirit of defense and belligerency is unnecessary. In conference there has always been a recognition of the essential factor of medical service in all health activities and that the profession of medicine was the only authoritative source of medical knowledge. The Committee believes that the administration of health and welfare laws may be made reasonably satisfactory to the profession by organized medicine through its Committee on Public Relations seeking conference, and then stating its position as to the administration of these laws.

The Committee believes that a satisfactory understanding can be reached much better by conference than by controversy. Whenever this plan has been used in the local administration of public health and welfare laws, it has usually resulted in establishing a relationship satisfactory to the local profession. The Committee believes that the profession will get farther by conference and co-operation than it will by controversy and belligerency; that if these methods are generally adopted public opinion will support the present position of medicine. This Committee believes that at least a part of the situation confronting the profession of medicine is the profession's fault to a larger extent than is generally recognized by the profession, and that misunderstandings may be more easily cured than it thinks.

The Committee has found that every department of the State government and voluntary agencies has been willing to confer, that they have been appreciative to consult organized medicine, and willing to give and take in the differences of opinion so as to reach a common ground. The Committee believes, after

years of experience, that if medicine approaches official and unofficial agencies, and particularly health and welfare agencies, in a spirit of opposition or too great rigidity of demand it will advance State interference in the practice of medicine. On the other hand, a spirit of conference and co-operation will advance leadership and control in local public health and welfare administration; examples of these statements exist in several places in New York State where the local profession is satisfied with its relationship to these agencies; relationships arrived at by making full use of the spirit of conference to remove misunderstandings.

There are tangible and intangible—visible and invisible—forces at work today in efforts to bring about so-called social betterment. Some of these forces perhaps are moving toward a new economical order and perhaps are more subtle than we have realized.

The real avenue to a solution of the problems confronting the practice of medicine lies in an understanding of the responsibilities of organized medicine.

One important thing that our Committee has been doing is to instruct medical students in their duties to organized medicine and its problems. We believe that many of medicine's present difficulties would never have originated if more of the young men in medicine were actively at work in their County medical societies, and took a greater interest in our State meetings and were initiated earlier into the various activities of our State Society. The average young medical man is not now interested in the problems of his profession because he learned little about it during his school years and does not, sufficiently early, become active in the work of his County medical society. Furthermore, such a group sharing in the work and control of our State Society would make it more elastic and adaptable to present-day demands, and the organization would find it easier to advance the present-day attitude of medicine.

Medicine must develop a co-operative spirit. We should meet those who have constructive suggestions in a respectful and tolerant spirit.

No individual and no group can be self-sufficient in this world. Medicine

must come to understand the need for co-operating its efforts with the efforts of many other groups in the struggle for the advancement of health conditions. Medicine must co-operate with those who offer anything of value in the struggle for betterment and this co-operation is as vital to our welfare as it is to the welfare of the rest of the world.

We will never win victories by just thinking about them. It is necessary to show the government of New York State that State Medicine is not needed. We should be able to do this by closer contact with departments of the State government and with the Governor of the State regarding future practice of medicine and the reasons why organized medicine takes a positive stand against state or socialized medicine.

This committee should study all relief projects that may be advanced for the purpose of determining their influence upon the practice of medicine.

The Sub-committee on the Deaf and Hard of Hearing has suffered the loss by death of its interested and active chairman, Dr. Wendell C. Phillips. This being a dual committee of the Committee on Public Health and Medical Education and the Public Relations Committee, it has been arranged by Dr. Farmer and this Committee that the Sub-committee shall continue its work under the chairmanship of Dr. Augustus J. Hambrook, of Troy, Dr. Fairfax Hall, of New Rochelle, being the other member; that they shall co-operate with the Medical Inspection Bureau of the Department of Education and the New York League for the Deaf and Hard of Hearing. This Sub-committee is gradually accomplishing a very beneficent piece of work and its co-operation with other agencies and the otologists of the State will, we hope, eventually lead to improved conditions and better care for those handicapped by deafness or difficulty in hearing.

The two objectives of the Committee, as stated in our last report; viz., raising the standard of otological care of children in schools for the deaf, secondly, working for conservation of the hearing of all school children, have been developed; and I feel already they are beginning to have results. In our last report we stated that the deaf schools of the State, seven

in number, have approximately 1,700 children, and we are reliably informed that an examination by an otologist is now required before entrance to a school for the deaf, and that many of these schools are giving more attention to the ears of their pupils.

This year the Committee has developed more fully its second objective, i.e., the conservation of hearing of all school children. This is a real problem, when we consider that in the schools of the State, we have over 3,000,000 pupils, and from reliable surveys made in several schools, where the audiometer was used to determine acuity of hearing, from 4 to 10 per cent were found with some degree of impaired hearing. Not enough of the audiometers are available in the schools, and the medical school examiners are thus handicapped in their work. Conferences have been held with Dr. Lewis A. Wilson, Assistant Commissioner in charge of Special Education; Mr. Joseph Endres, Chief of the Bureau of Handicapped Children; Dr. D. F. Smiley, Chief of the Medical Inspection Bureau; Dr. Thomas Parran, Commissioner of Health; Dr. Paul Brooks, Deputy Commissioner of Health; and Dr. Walter Craig, all with the object of evaluating the work and correlating plans for more effective methods for further diagnosis and treatment of children found with hearing losses.

Our work should consist in finding out the number of children with impaired hearing, the treatment and correction, as far as possible, of the hearing losses, and the placing in hard of hearing classes of all children, with hearing losses sufficient to warrant such instruction. The Education Law provides that where ten or more children are in need of such instruction, special provisions are made for teachers in lip reading and other improved aids, thus giving to this class of handicapped children the education, which is their right. Conservation of the hearing is at the same time being effectually carried out. The younger the child, the better will be the results, as during the first six years of life, the ear is developing from infantile to adult, and is more susceptible to infections and possible hearing losses.

We must teach the need of oral hygiene, the isolation of all cases of in-

fection of the upper respiratory region, and the prompt treatment of ear complications when they occur. The County Medical Society can be of the greatest help to the Education and Health Departments by co-operating with Parent and Teachers groups, League for Hard of Hearing, and others interested in disease prevention and conservation of hearing.

We have not been content this year with the school child, but have as well considered the preschool child. Dr Fairfax Hall, a member of the Committee and chairman of the committee on preschool examinations of the New Rochelle Medical Society, has started what we think is a fertile field in the early care of preschool children. In Westchester County examinations were made by the family doctor, at pry clinics, and free clinics. Publicity was given through the newspapers, and it is felt that the result of this work is a very valuable public health measure. Many conditions were brought to the attention of the parents, which, given suitable care, will be helpful to the child's proper development and good health. Especially is this true of the infections of the upper air passages and ear infections. As it is during the first four to six years of life that many of these infections of the ear occur, and if not recognized and properly treated, serious hearing losses may be the result.

Doctor Hall should be commended for taking the initiative in this very important work, and we hope to see other County Medical Societies take similar action. The County Medical Society should recognize the great importance from the standpoint of the correct and early diagnosis of hearing defects, both in the preschool and school child and through the early diagnosis and treatment, the conservation of hearing of thousands of our school children will eventually follow. The Subcommittee favors the enactment of uniform State legislation requiring all doctors to report to the State Board of Education each and every case of partial or total deafness among children 16 years and under, met with in the course of their professional practice.

The Subcommittee is especially indebted to Dr Joseph S. Lawrence, Executive Secretary of the Medical Society of the State of New York, for his untiring

efforts and co-operation with the Committee. To our secretary Miss Samuelson, the Subcommittee can truly say, that her work made possible the results obtained. She will be in charge of an Exhibit for the Deaf and Hard of Hearing, at the State Society meeting at Albany.

Members of the Committee have appeared before medical groups, the New York conference on Social Work, Parent-Teachers Association, service clubs, and other organizations. Subcommittees have been formed in each County Society, articles written for journals on conservation of hearing, and other ideas undertaken, such as the Exhibit to be held in Albany at the meeting of the State Society. Present laws may make funds available for the correction of conditions causing the hearing defects in indigent cases. Several new bills have been introduced in the present session of the Legislature towards more thorough school examinations. The Committee has been in constant touch with the Legislative Committee of the State Medical Society. If we all work together, conservation of hearing in our school children will be a reality.

A ruling by the State Department of Education whereby crippled children coming under the provisions of the Handicapped Children's Law can only be admitted to hospitals, which have made arrangements for carrying on the general education of the child whilst under surgical care and which have a Physio-Therapy Department, is definitely to the disadvantage of the surgeons of the State as it relegates these children largely to State-controlled institutions when as a fact a large proportion of such crippled children can be satisfactorily cared for in their own County by the private surgeons of their vicinity.

Conferences with representatives from the Department of Education and the Department of Health have resulted in these restrictions being removed in all such cases of crippled children where the condition is remediable within a period of two to three months. This makes it possible to care for most of the crippling conditions of children in their own County and by their own surgeon, who is compensated for his services under State aid.

It seems most unfortunate that more of the surgeons of the State, especially those doing orthopedic work, do not avail themselves of the opportunity presented to care for such cases under the provisions of the Handicapped Children's Law. It would seem as though there should be one or more surgeons in each County who will undertake this type of work and enable the crippled child to be cared for in his own neighborhood and by a surgeon of the vicinity rather than by one in the employ of the State. Neglect upon the part of our surgeons to avail themselves of the provisions of this law, obtain court orders and do the necessary surgical work in the various hospitals throughout the State is resulting in a great economic loss to the profession and gradually fostering the development of State Medicine for the Crippled or Handicapped child.

Your Committee notes with satisfaction the progressive spirit of advancement shown in certain County medical societies where the medical profession are co-operating with other agencies and establishing a higher grade of medical practice especially with reference to Public Health and the prevention of disease. In many instances this is being accomplished without sufficient paid executive force and through the untiring efforts of high-minded medical men who are sacrificing themselves in a heroic effort to raise the standard of medicine in their County.

Other County medical societies are raising their standard and meeting present-day requirements by employing executive secretaries who relieve the medical men of much of the detail administrative work connected with the carrying on of a proper program of medical leadership.

This Committee recommends to the House of Delegates that some plan should be considered which would encourage more of the County medical societies to employ full-time paid executive secretaries with centralized office and equipment so that all medical problems could receive *prompt attention*, medical bulletins published, and the membership kept informed and activated on all questions appertaining to present-day practice.

Your Committee is impressed with the necessity of its being provided with a

sufficient budget allowance to permit it to have a full-time Field Secretary who shall be constantly at work throughout the State assisting the County Society Public Relations Committees to develop their programs and put into execution the activities which this Committee develops. The salary and expense of such paid field worker would be approximately \$5,000 per year. Such expense is especially warranted in these times when co-operation with other agencies is most essential to demonstrate to the public that medicine is doing its part in endeavoring to distribute to all of the people the benefits to be derived from the advances in the science and art of medicine. This suggested expenditure should be given careful consideration by our Trustees.

Inasmuch as this Committee is for conference with other agencies, official and unofficial, and has no power to make final decision upon the various problems arising throughout the year, it is suggested that the Chairman or his designated representative, be invited to attend the meetings of the Executive Committee in order that a full and free explanation of each subject can be brought to the Committee. Resolutions and reports are frequently not sufficiently explanatory and may not give the correct viewpoint of the situation. This is simply another example of the necessity of conference and co-operation, but within our own ranks. The experience of this Committee over the past seven years would indicate the necessity of eliminating some of our fixed ideas and becoming more open minded and constructive in our internal and external affairs. We should develop our State Society and County units upon such a high standard of efficiency as to forestall any and all efforts that tend to socialized or State medicine.

We wish to express to our Secretary, Dr. Ross, and to our Executive Officer, Dr. Joseph S. Lawrence, our keen appreciation for their interest and untiring efforts in behalf of the work of the Committee. The work of the Committee has been constructively advanced by the wise counsel and advice of our President, Dr. Bedell, and our Secretary, Dr. Dougherty. To Dr. Thomas P. Farmer, Chairman of the Committee on Public Health and

Medical Education, who has been most co-operative and helpful, the Committee desires to extend its gratitude and appreciation.

Respectfully submitted,

J. E. SADLER, *Chairman*

April 1, 1935

REPORT OF COMMITTEE ON MEDICAL RESEARCH

To the House of Delegates; Gentlemen:

In behalf of your Committee on Medical Research, I have the honor to present the following report.

The opposition to medical research in this State has been unusually quiet during the latter half of 1934. The concentrated efforts of the antivivisectionists during this time were directed in an unsuccessful campaign elsewhere.

It was not until February 28 that Mr. McDermott introduced the annual antivivisection bill, Assembly Int. 1863. Immediate steps were taken to inform the members of the codes committee that similar bills had been introduced for the last five years with no adequate reasons for their adoption. In public hearings at Albany on these bills the antivivisectionists had produced no evidence that the present laws were ineffectual. Many prominent citizens all over the state wrote to the members of the committee protesting against the McDermott bill, No. 1863. The result was that the assembly com-

mittee defeated this bill in the meeting on March 12. Consequently, it was not necessary to call upon those members of the medical profession who annually sacrifice their valuable time in an excursion to Albany to appear personally against the antivivisection bill.

The American College of Surgeons, unaware of the fact that New York State has had an active functioning committee for many years, appointed a separate committee to act against the antivivisectionists in this State. Your chairman succeeded in keeping this committee inactive as it was considered dangerous to have disconcerted action which might do more harm than good.

Your chairman wishes to thank the members of the Assembly Codes Committee for their intelligent action in defeating the McDermott bill, Assembly Int. 1863.

Respectfully submitted,

JOHN J. MORTON, *Chairman*

April 1, 1935

REPORT OF BOARD OF TRUSTEES

To the House of Delegates; Gentlemen:

The Board of Trustees has held no regular meetings during the past year, but has assembled on call of Chairman, whenever there was business to be transacted, or matters of policy to discuss. Several special meetings of the Investment Committee have been held.

It is a satisfaction to be able to report that the funds of the Society are invested in the soundest securities that could be obtained. The securities have been kept under careful review, and we have had, from time to time, the advice of financial experts. In investing funds of the Society, we have aimed, first, at security. There has been depreciation of some of the bonds, but the present values of most of our holdings show an advance in the present market.

The Trustees have had excellent advice and co-operation from the Treasurer, in

dealing with financial matters. The Treasurer embodies in his report the details of the finances of the Society, and it would be superfluous to duplicate the details in the report of the Trustees.

The Society is fortunate in having income producing funds, which enables the organization to exert its influence in the betterment of health and well-being of the public through its membership.

The budget, as presented by the Executive Committee, was given careful study, and approved, with but few modifications.

It has been the policy of the Trustees to exercise as close economy in expenditures as is consistent with efficient function of the various standing and special committees, as well as the performance of the duties of the various officers.

Respectfully submitted,

GRANT C. MADILL, *Chairman*

April 1, 1935

REPORT OF THE TREASURER

Balance Sheet, December 31, 1934

ASSETS			
CURRENT ASSETS: Cash			
Petty Cash.....	\$43.17		
On Deposit.....	10,837.81		
		\$10,880.98	
Accounts Receivable:			
Directory Advertising.....	\$1,755.00		
Directory Sales.....	498.10		
		2,253.10	
Investments (Bonds — Par Value \$96,000.00 — Cost \$94,785.26):			
At Market Value.....		86,009.37	
Accrued Interest on Investments.....		1,127.60	
		\$100,271.05	
TRUST FUND ASSETS:			
Union Dime Savings Bank:			
Lucien Howe Prize Fund.....	\$1,009.99		
Merritt H. Cash Prize Fund.....	388.15		
		\$1,398.14	
Investments (Bonds — Par Value \$102,000.00 — Cost \$101,336.25):			
At Market Value.....		91,878.12	
Accrued Interest on Trust Fund Investments.....		1,068.14	
Cash on Deposit.....		11,913.37	
		106,257.77	
DEFERRED CHARGE: Postage in Hands of JOURNAL Publisher.....		6.29	
FIXED ASSETS: Office Furniture and Fixtures.....		1.00	
		\$206,536.11	
LIABILITIES, TRUST FUNDS AND SURPLUS			
DEFERRED INCOME:			
1935 Annual Dues Received in Advance.....		\$2,250.00	
TRUST FUNDS:			
Lucien Howe Prize Fund.....	\$3,686.09		
Merritt H. Cash Prize Fund.....	1,672.57		
Wear, Tear, Loss and Depreciation Fund.....	62,086.99		
JOURNAL Fund.....	20,955.62		
Directory Fund.....	17,856.50		
		106,257.77	
SURPLUS (General Fund):			
Balance — January 1, 1934.....	\$86,814.34		
Add: Increase in Market Value of General Fund Investments from January 1, to December 31, 1934.....	\$5,066.24		
Excess of Income Over Expenses for the twelve months ended December 31, 1934.....	38,277.37		
		43,343.61	
		\$130,157.95	
Deduct: Transferred to Wear, Tear, Loss and Depreciation Fund.....	32,129.61		
		98,028.34	
BALANCE, December 31, 1934.....		\$206,536.11	
JOURNAL ACCOUNT FOR TWELVE MONTHS ENDED DECEMBER 31, 1934			
Expenses			
JOURNAL Management Committee:			
Salaries.....	\$1,600.00		
Expenses.....	889.43		
		\$2,489.43	
JOURNAL Publication Costs.....		6,734.10	
Total costs of JOURNAL.....		\$9,223.53	

DIRECTORY ACCOUNT FOR TWELVE MONTHS ENDED DECEMBER 31, 1934

Expenses

Publication Printing	\$11,679 23
Salaries	4,822 65
Commissions	622 00
Discounts	36 00
Delivery	1 657 14
Stationery	315 00
Postage	870 30
Sundry Expense	110 58
	<u>\$20,112 90</u>

Income

Advertising	\$3 180 00
Sales	2 873 24
Income from Dues (\$1 00 per member)	13,193 00
	<u>\$19,246 21</u>
Net Cost of Directory	866 66
	<u>\$20,112 90</u>

STATEMENT OF INCOME AND EXPENSES FOR TWELVE MONTHS ENDED DECEMBER 31, 1934

Expenses

Committee On	
Legislation	\$6 397 10
Public Health	6 912 56
Economics	2 473 20
Public Relations	1 177 56
Scientific Work	580 69
Medical Research	242 79
Trends	60 22
Co Sec Conference	561 02
District Branches	2 239 33
Special Appropriation—	
District Branches	200 00
Executive Officer's Salary	8 000 00
Executive Officer's Expenses	857 06
Secretary's Honorarium	
and Expenses	3 550 00
Salaries—General	14 321 70
Legal Expenses	12 433 05
Traveling Expns A M A	585 40
General	3 031 94
Annual Meeting—1934	966 79
Auditing	500 00
Rent	2 599 99
Stationery and Printing	1 020 94
Postage	323 05
Telephone	143 89
Custodian Fees (Investments)	179 00
Office Sundry Exp	973 58
Meeting Officers and Committees	829 10
Censor's Meeting	412 19
Contribution New York County—Appeal Albee Case	1,500 00
Bad Debts Charged Off JOURNAL—	
1933 Advertising	529 86
Directory—	
1931 1932-1933 Advertising	635 00
Total Cost of JOURNAL Transferred from JOURNAL Account	9 223 53
Net Cost of Directory Transferred from Directory Account	866 66
Total	<u>\$84 327 70</u>
Excess of Income over Expenses Transferred to Surplus	38 277 37
	<u>\$122 605 07</u>

Income

Annual Dues Received	
Arrears	\$1 056 00
1933	13 320 00
1934	117 560 00
	<u>\$131,936 00</u>
Less Dues credited to Directory	13 193 00
Balance	<u>\$118 743 00</u>
Interest Earned on General Fund Investments	3 755 22
Clerical Work	106 85

The above accounts have been audited and found correct by Wolf & Company, C P A, New York State

Respectfully submitted
CHARLES H. GOODRICH, Treasurer

REPORT OF BOARD OF CENSORS

To the House of Delegates; Gentlemen:

There has been held during the year but one session of the Board of Censors.

The Board convened in the offices of the Society, 2 East 103rd Street, New York City, on Wednesday, June 20, 1934, at 10:30 A. M., to hear the Appeal of Dr. Fred Houdlett Albee against the action of the Medical Society of the County of New York suspending him from the rights and privileges of membership for the period of one year.

The following Censors were present: Richard H. Sherwood, Louis A. Van Kleeck, Clark G. Rossman, C. Knight Deyo, Alfred C. Bates, William A. Groat,

and Raymond G. Perkins; Arthur J. Bedell presiding; Daniel S. Dougherty, Secretary.

The appellant was represented by Mr. Lloyd Paul Stryker; the respondent by Mr. Reed B. Dawson; Mr. Lorenz J. Brosnan acting as legal advisor for the Board.

After careful consideration of the discussion and the evidence presented the Appeal was denied and the action of the Medical Society of the County of New York upheld by a unanimous vote.

Respectfully submitted,

DANIEL S. DOUGHERTY, *Secretary*
April 1, 1935

REPORT OF THE COUNSEL

To the House of Delegates; Gentlemen:

Your Counsel herewith submits his report of the activities of the Legal Department of the Medical Society of the State of New York for the period from March 1, 1934, to and including February 28, 1935.

What we have said in previous reports with respect to the activities of our Department applies with equal force to the present reporting period. The past year has been an exceedingly busy one both in court and in consultation. A report contains only conclusions. It does not give any adequate picture of the work involved or the responsibility assumed by our Department.

Your Counsel has greatly enjoyed his association with your officers and committeemen. It requires contact with them to realize the splendid work they are doing for the members of your Society in connection with the important problems that confront organized medicine. Your Counsel wishes to express his appreciation to these gentlemen for their assistance and co-operation.

In making his report your Counsel adheres to the convenient category employed in previous years whereby his activities have been divided into three main divisions: (a) The actual handling of malpractice actions before courts and juries and in the Appellate tribunals; (b) counsel work with officers, committees and individual members of the Society;

and (c) legislative advice and activities.

Litigation

Once again your Counsel is pleased to be able to report in the field of litigation the splendid work of his associate, Mr. William F. Martin. Mr. Martin enjoys the respect and confidence of the judges throughout the State and on many occasions they have spoken to me most favorably about Mr. Martin's high character and his splendid ability as an advocate. Similar expressions have come from many members of your Society with whom Mr. Martin has come in contact either in court or in consultation.

Excellent work has also been done by your Counsel's associate, Mr. Thomas H. Clearwater, the attorney for the Society.

Your Counsel has reason to be proud of the splendid spirit of loyalty and devotion manifested by his entire staff, both legal and clerical.

With this preliminary statement we note that there were commenced in the present *twelve-month* reporting period 232 actions as against 230 actions during the previous *thirteen-month* reporting period. These actions do not include a large number of claims in which we were successful in persuading the claimants or their attorneys not to bring suit. There remain a number of claims outstanding in which suit may ultimately be brought. Of the 201 actions disposed of during the reporting period, 39 have been settled.

In 156 actions we have obtained judgments for the defendants after trial, or they have been disposed of through dismissal, discontinuance, or abatement. In 6 cases judgments were rendered in favor of the plaintiff. Of these cases 2 are now pending in the Appellate Division.

In the Appellate Division of 5 cases appealed 3 were won and 2 were lost.

We note from Table I that there are now pending 625 cases.

In connection with the subject of litigation it is in point to note that the Society has had in operation for over a decade a group plan of insurance which affords the members an opportunity to protect themselves against the hazard of litigation.

The Insurance Committee of the Society is composed of Dr. Charles H.

Goodrich and Dr. Samuel J. Kopetzky. This committee representing your Society has held a number of meetings in the past year in connection with questions that are before them for consideration. Mention should be made of the splendid work which they are doing for the members of your Society.

Table II gives a comparison of the number of members insured in 1932, 1933, 1934, and 1935, and the number of members in the County societies, and the percentage of insured members in the County societies, and in the entire State Society. The figures are sufficiently clear to obviate the necessity of extended comment.

Counsel Work

During the period of this report, your

TABLE I

Comparison of the Number of Suits Instituted and Disposed of in 1933-1934 and 1934-1935

	Instituted		Disposed of	
	1933-1934 (13 months)	1934-1935 (12 months)	1933-1934 (13 months)	1934-1935 (12 months)
1 Fractures, etc	29	25	21	14
2 Obstetrics, etc	22	24	15	19
3 " " "	2	2	4	3
4 " " "	22	28	18	20
5 " " "				
etc	68	55	50	51
6 Needles breaking	1	5	4	3
7 Infections	19	21	15	11
8 Eye infections	4	5	2	5
9 Diagnosis	26	29	26	23
10	5			3
11	32	38	49	49
Totals	230	232	204	201
Further Comparisons				
Actions for death	24	25	19	22
Infants' actions	15	19	20	33
Totals	39	44	39	55
How Disposed of				
Settled			41	39
Dismissed, discontinued, abated or tried (verdict for the defendant)			160	156
Judgment for plaintiff			3	6
Totals			204	201
Further Comparisons				
Appeals			5	3
Pending			2	2
Pending at January 20, 1935	594			
Pending at January 20, 1935	625			

TABLE II

*Comparison of the Number of Members Insured in 1932, 1933, 1934 and 1935 and the Number of Members in the County Societies and the Percentage of Insured Members**

	1932			1933			1934			1935		
	A,	B,	C.	A,	B,	C.	A,	B,	C.	A,	B,	C.
Albany.....	248	147	59	257	160	62	254	146	57	265	164	62
Alleghany.....	31	12	39	31	13	42	33	14	42	34	16	47
Bronx.....	964	508	53	1,007	516	51	1,013	513	51	1,022	472	46
Broome.....	136	70	51	141	80	58	145	88	61	159	92	58
Cattaraugus...	48	32	67	46	33	72	45	31	69	51	31	61
Cayuga.....	59	35	60	63	35	56	64	35	55	58	39	67
Chautauqua...	89	52	60	93	55	59	89	54	61	88	54	61
Chemung.....	68	51	75	69	51	74	69	49	71	69	46	67
Chenango.....	32	21	65	33	21	64	33	22	67	33	20	61
Clinton.....	30	17	57	29	18	62	29	16	55	27	15	56
Columbia.....	36	20	55	37	22	59	36	21	58	39	21	54
Cortland.....	24	12	50	23	15	65	24	16	67	27	17	63
Delaware.....	27	6	45	27	10	37	28	14	50	26	14	54
Dutchess-Putnam	128	63	50	138	74	54	151	77	51	155	85	55
Erie.....	807	465	58	809	455	56	798	440	55	750	440	59
Essex.....	21	14	69	20	15	75	20	15	75	21	15	71
Franklin.....	54	14	26	53	18	34	51	18	35	51	19	37
Fulton.....	36	23	64	36	22	61	38	25	68	41	27	66
Genesee.....	31	16	52	28	17	60	28	15	54	27	15	56
Greene.....	22	13	60	21	14	67	23	14	61	23	16	70
Herkimer.....	46	34	74	46	37	80	44	34	77	44	32	73
Jefferson.....	85	44	52	86	46	53	87	46	53	87	46	53
Kings.....	2,260	1,298	57	2,301	1,368	59	2,241	1,175	52	2,221	1,173	53
Lewis.....	16	6	38	18	9	50	19	10	53	18	11	61
Livingston.....	35	17	49	34	16	48	31	21	70	35	21	60
Madison.....	33	14	42	30	13	43	30	14	47	31	19	61
Monroe.....	475	285	60	467	294	63	453	292	64	448	289	64
Montgomery...	47	13	28	49	18	36	52	18	35	52	19	37
Nassau.....	221	135	61	243	146	60	253	150	60	265	169	64
New York.....	3,995	2,376	60	4,077	2,339	57	3,951	2,237	57	3,979	2,244	57
Niagara.....	96	69	73	105	75	71	98	73	74	105	76	72
Oneida.....	205	99	48	200	100	50	191	108	57	200	111	56
Onondaga...	346	247	71	340	252	74	333	221	66	325	219	67
Ontario.....	78	37	47	75	38	51	67	39	58	72	40	56
Orange.....	111	71	64	115	79	69	122	87	71	126	92	73
Orleans.....	21	9	43	23	10	43	23	10	43	22	8	36
Oswego.....	47	26	55	46	28	61	43	31	72	48	37	77
Otsego.....	45	25	56	48	33	69	50	26	52	49	32	65
Queens.....	549	356	65	575	372	65	568	366	64	599	361	60
Rensselaer.....	124	56	45	118	65	55	107	68	63	109	71	65
Richmond.....	99	50	51	99	51	52	100	46	46	115	47	41
Rockland.....	56	29	52	56	29	52	61	28	46	63	33	52
St. Lawrence...	61	24	40	64	27	42	61	26	42	63	26	41
Saratoga.....	57	24	42	50	30	60	53	31	59	50	34	68
Schenectady...	123	83	68	130	90	69	133	89	68	127	88	69
Schoharie.....	20	8	40	20	9	45	20	11	55	21	10	48
Schuyler.....	11	5	45	12	6	50	12	6	50	12	6	50
Seneca.....	22	9	41	22	10	45	22	11	50	26	12	46
Steuben.....	73	41	56	69	44	64	74	44	60	66	43	65
Suffolk.....	125	61	49	129	65	51	144	69	48	155	81	52
Sullivan.....	36	22	61	37	21	57	38	25	70	40	25	63
Tioga.....	21	8	38	22	9	41	24	10	42	26	11	42
Tompkins.....	59	29	50	59	33	56	59	32	54	59	35	59
Ulster.....	66	38	58	69	44	67	69	40	58	65	41	63
Warren.....	44	27	61	42	29	69	43	28	65	44	28	64
Washington....	41	18	44	41	19	46	39	18	46	35	18	51
Wayne.....	43	30	70	42	29	69	44	27	61	50	30	60
Westchester...	460	274	60	485	284	59	515	290	56	540	298	55
Wyoming.....	31	10	32	33	12	36	34	15	44	33	12	36
Yates.....	21	14	67	19	15	79	22	17	77	23	18	78
	13,195	7,699	58	13,457	7,925	59	13,299	7,512	56	13,417	7,584	56

* A = number of members in County Society; B = number of members insured; C = percentage insured.

Counsel has prepared for publication in the Society's JOURNAL articles in the nature of editorial comment. These editorials have included the following:

Consent to Operation—An Interesting Case.

Evidence—Tests to Determine the Truth or Falsity of Testimony.

Charitable Hospitals—Exemption from Liability for Negligence of Nurse.

Physician and Patient—Duty to Warn Patient of Dangers Incidental to Operation.

Physician and Patient—Waiver of Privileged Communication.

Malpractice—A Gratifying Decision by an Appellate Court.

Death Action—Physician's Responsibility. Chiropactors—Illegal Practice of Medicine.

Death by Accident or Disease.

Revocation of Physician's License—Unprofessional and Dishonorable Conduct.

Illegal and Fraudulent Practice of Medicine.

Operation, Foreign Body—Responsibility of Surgeon.

Charitable Hospitals—Liability for Suicide of Patient.

Civil Liability of an Unlicensed Practitioner.

Responsibility of Physician for Negligence of Dentist.

Health Officers—Court's Construction of Powers.

Illegal Practice of Medicine—A Quack is Convicted of Manslaughter.

Physicians—Liability for Acts of Substitute Physicians.

Operation without Consent—Surgeon's Right to Operate in Emergency.

Tonsillectomy—Claimed Negligence in Connection with Operation.

Your Counsel has also digested and there have been published in the STATE JOURNAL case reports upon malpractice actions which it has been felt were of special interest to the members of the profession. The case reports published during the previous year are as follows:

Erysipelas Alleged to Have Resulted from Doctor's Negligence.

Alleged Negligence in Appendectomy.

Death Claimed Due to Delayed Operation.

Death Following the Extraction of Teeth.

Treatment of Warts.

Claim of Negligence in Tracheoplasty.

Claim of Negligence in Connection with Use of Lane Plate.

Explosion of X-ray Tubes.

Claimed Negligence in Performance of Herniotomy.

Death from Peritonitis.

Treatment of Lacerated Hand at Clinic.

Claimed Negligence in Performing Tonsillectomy.

Plastic Surgery on Nose.

Treatment of Laceration of Thigh.

Burns Due to Bandage Catching Fire.

Claimed Failure to Detect Glaucoma.

Failure to Determine Presence of Particle of Glass.

Claimed Failure to Detect Bullet in Finger.

Loss of Eye Caused by Infection.

Alleged Negligent Treatment of Cat-Bite.

Death of Infant Following Delivery.

Claimed Fracture of Hip as Result of Fall from Hospital Bed.

Claimed Failure to Remove Rubber Drain.

Treatment of Obstructed Tear Duct.

Claimed Negligent Appendectomy.

Claim of Improper Amputation of Fingers.

Death of Patient Following Cholecystectomy.

Alleged Negligent Treatment of Ischio-rectal Abscess.

Claimed Negligent Operative Treatment of Muscular Dystrophy.

Claimed Injury to Uvula.

Amputation of Leg Subsequent to Herniotomy.

Alleged Diathermy Burn.

Plastic Operation on Nose.

Alleged Negligent Removal of Tonsils and Adenoids.

Broken Screw in Leg.

Your Counsel is pleased to learn from the members of your Society that they find these reports and editorials interesting and instructive.

In addition to his other duties, your Counsel receives frequent requests for opinions on various subjects. It should be remembered that the Executive Committee of your Society has ruled the requests for legal opinion, whether coming from individual members of your Society or from component County Societies, must in the first instance be referred to that body for action. If the Executive Committee deems the inquiry a proper one for opinion by the Legal Counsel, it refers the same back to him for reply. Some of the matters upon which advice has been thus rendered are the following:

1. Communication from a physician on

behalf of a Hospital Staff concerning the responsibilities of supervising surgeons in the following instances:

(a) Liability of supervisor who participates in no other way than as observer in the operation performed.

(b) Liability of a hospital for acts of a doctor performing an operation who has not been granted full privileges, but only to demonstrate his qualifications under supervision.

(c) Liability of supervisor in case he displaces an operator under his supervision who is deemed unable to cope with the situation at hand.

2. Inquiry from a physician as to necessity for hospital physiotherapist to be licensed by the State of New York and as to liability of a physician referring cases to hospital physiotherapy departments in cases of patients receiving burns during treatment.

3. Communication from an attending physician on a hospital staff, with a graduate interne on his service, who carries out treatment under his supervision, inquiring as to necessity for the attending physician to be present during the performance of blood transfusions or other intravenous therapy, and as to the legal responsibility in such cases of the attending physician and of the hospital.

4. Inquiry from a physician as to the legality of a hospital or a layman employing a physician as a pathologist and making charges for his professional services, which services include the making of diagnoses, giving of prognoses and the prescription of treatment, and whether the practice of pathology as mentioned above constitutes the practice of medicine.

5. Inquiry from a physician as to the legal responsibility of an operating surgeon in the event that some accident should occur during an operation, such as a miscount of sponges:

(a) When a graduate nurse is present;

(b) When an undergraduate nurse is present.

Further inquiry as to whether the patient could take action against the hospital.

6. Communication from the superintendent of a hospital requesting an opinion relative to the responsibility of a hospital and its physicians in connection with certain proposed laboratory work.

7. Inquiry from a physician as to the legality of a contract entered into between physicians restricting the practice of medicine.

8. Inquiry from a component County Society requesting information as to the following:

(a) What licensing requirements cover the operation of institutions for the care of alcoholics.

(b) If such an institution is run by a lay individual, what provision must be made for medical supervision.

(c) Is the routine care of alcoholics considered medical practice which must be performed by a licensed physician?

9. Communication from a physician inquiring as to his right to testify in court regarding a former patient.

10. Inquiry from a physician requesting an opinion as to whether when in the course of pregnancy a physician finds symptoms appearing that the fetus has died, he is obliged to call in another physician to agree with him that the fetus is dead before he may legally proceed to abort or induce labor.

11. Inquiry from a component County Society as to whether a physician who is employed on a salary basis by a welfare organization may be barred from membership in a County Society.

12. Inquiry from the superintendent of a hospital inquiring as to the legal responsibility of the hospital and a physician appointed to supervise nurse anesthetists in the event of negligence on the part of the nurse anesthetists.

13. Inquiry from a physician who has made a physical examination of a claimant at request of a company against whom claim was made, as to his rights to reveal to the company information concerning the claimant, obtained upon treating the man years before.

14. Communication from a physician requesting information concerning patients treated under the Welfare Laws:

(a) Is a physician responsible to the patient (or to the patients family) or the Welfare officer in advising the nature of treatment?

(b) Who is legally responsible for the outcome of a medical or surgical welfare case where treatment advised by the physician is refused or not authorized by the Welfare officer and where, later on, it is shown that the lack of treatment advised has prejudiced the recovery of the patient?

15. Inquiry as to the criminal and civil liability of a physician who accedes to the request of a patient, that her fallopian tubes be cut to prevent further pregnancies, during the performance of an abdominal operation.

16. Inquiry from a physician as to the legality of action by local school authorities, appointing a physician, other than a health officer, to make examinations of school children.

17. Inquiry from a physician for an opinion concerning the following problem:

(a) In the case of a patient adjudged mentally defective and already committed to one of the State institutions for the care and treatment

of mental diseases, what responsibility would rest on the shoulders of a private hospital accepting the previous patient of a State institution for mental disease by transfer?

(b) Would the opinion of the physician in charge of the patient in this private institution be final as to whether or not the patient was to be deemed fit at any given time for discharge?

18. Communication from a physician requesting an opinion as to whether or not he should be required to make known diagnoses or case histories of former patients who have afterwards applied for financial aid to welfare agencies, both governmental and private.

19. Inquiry from a physician as to the legality of male sterilization.

20. Inquiry as to whether the employment of a secretary, either on a percentage basis or otherwise, who engages in solicitation with various insurance companies on behalf of the physician, is in conflict with the principles of Professional Conduct of the Medical Society of the State of New York.

21. Communication from a physician on behalf of a hospital staff for an opinion on the following:

(a) Is a surgeon permitted to operate on an emergency case, when a patient is unconscious and unable to sign a consent, without rendering himself liable to a suit for damages?

(b) Must a patient be twenty-one years of age in order to give consent to operate?

(c) Is telephoned permission of a parent, witnessed and heard by a third party, sufficient?

22. A communication from a physician requesting an opinion in the following matter concerning professional ethics: A surgeon, a member of the attending staff of a hospital, has referred to him for operation a patient sent by an osteopath. Post-operatively the osteopath visits the hospital and with the consent of the surgeon, administers treatment, consults the charts, etc.:

(a) Is the attending surgeon within his ethical rights when he permits the procedure outlined?

(b) Is the hospital within its rights to refuse permission for the osteopath to administer treatments to a patient while hospitalized?

23. Inquiry from a physician asking for an opinion relative to the existing statutes forbidding or permitting the sterilization of humans.

In addition to the foregoing your Counsel has been asked to render advice and consider the following:

24. Inquiry from a component County Medical Society asking for an interpretation of the Civil Practice Act in so far as it relates to the power to compel, by the service of a subpoena, a physician to give

testimony regarding a patient he has treated in a hospital.

25. Inquiry from a component County Society asking for advice as to the steps necessary to prevent a physician who has been convicted and sentenced to prison, from being reinstated to practice medicine.

26. Inquiry from a member of a hospital staff asking for opinions on the following:

(a) Who is the legal owner of hospital records?

(b) Who has the legal right to subpoena hospital records in a lawsuit, the defendant or the plaintiff?

(c) Is it legal for records to be subpoenaed subject to telephone call?

(d) Is it legal to remove any part of a record from the chart before allowing it to be copied, or after it has been subpoenaed by the court?

(e) Is an attorney who holds a signed and notarized authorization from the patient permitted to see and copy all records pertaining to said patient's stay at the hospital?

(f) Is it legal for a lawyer representing an insurance company to be permitted to see said records without an authorization from the patient?

27. Inquiry from a physician on behalf of associate physicians who are established in common offices, using a common system of bookkeeping and who carry individual malpractice insurance policies as to the necessity of carrying a policy covering them as a group.

28. Inquiry from the Secretary of a component Medical County Society relative to the apparent abuse of the physician as a witness in court, with special reference to the rights of a physician when his testimony is in the nature of expert testimony.

29. Inquiries from physicians seeking information concerning decisions in the medicolegal articles in the JOURNAL.

30. Inquiry as to the legality of the practice by optometrists of removing foreign bodies from the eye.

31. Inquiry from a physician as to the advisability of signing an affidavit divulging information acquired in the course of professional treatment of a former patient.

32. Communication from a physician asking for advice in the following matter: A patient who had been treated by said physician in a hospital afterwards sued a public service corporation for damages, and said physician had been requested by an investigator to testify in court. Would said physician be guilty of breach of confidence if he so testified?

33. Communication requesting advice as to coverage under the group policy for acts of assistants:

34. Inquiry from a physician as to the extent of his rights and duties to testify

as to the fitness of a patient to assume the custody of his child.

35. Inquiry from a physician as to the extent to which a surgeon from a foreign country, not licensed in the State of New York, may engage in the practice of medicine in this State.

36. Inquiry from a physician as to the ethics of advertisements by physicians in the daily press.

Your Counsel acting with the Committee on By-Laws has examined the proposed amendments to the Constitution and By-Laws of a number of component County societies and has rendered advice and made suggestions in connection therewith.

Your Counsel has been in conference and consultation with the members of the Committee on Insurance with respect to various matters that have been referred to them for action.

Your Counsel has been in conference with the members of the Committee on Medical Trends and has prepared the existing contract entered into at the time of the formation of the Public Relations Bureau.

Your Counsel has also advised from time to time with the Chairmen and members of other standing and special committees of the Society.

Your Counsel has also rendered his assistance to the members of the JOURNAL Management Committee in the matter of

the applicability of the New York State Sales Tax to the NEW YORK STATE JOURNAL OF MEDICINE.

Your Counsel acted as legal advisor to the Board of Censors of the Society in connection with the appeal of Dr. Fred H. Albee from the disciplinary action of the New York County Society.

Legislative Advice and Activities

The present session of the Legislature has been an extremely busy one and many bills have been introduced of interest to organized medicine.

Your Counsel has drafted or assisted in drafting a number of bills introduced at the present session of the Legislature, and his opinion has been requested and given with respect to bills that have come before the Legislature affecting the medical profession.

Conclusion

Once again in concluding this report we do so by expressing our grateful thanks to the many members of your Society who have so generously given of their time and talents in assisting us in the defense of malpractice actions. Their co-operation and assistance are in no small measure responsible for the results shown by this report.

Respectfully submitted,

LORENZ J. BROSNAN, *Counsel*

April 1, 1935.

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

To the House of Delegates; Gentlemen:

The Committee on the revision of the Constitution and By-Laws appointed by the Executive Committee begs leave to present the following changes:

Constitution

Article IV. Delete "(c) the Editor-in-Chief" and change (d) to (c).

By-Laws

Chapter I. Delete Section 5 and substitute: "Honorary members shall be entitled only to the privilege of attending and addressing the meetings of the Society. Retired members shall not be subject to assessment but shall be accorded all the rights and privileges of

active membership with the exception of voting or holding office."

Chapter II. Section 1—Delete the words "with voice but without vote" making the sentence read "(d) the past presidents and past secretaries of the Society who shall be life members."

Chapter VIII. Section 1—Second paragraph—substitute for the word "maintenance" the word "expenses" making it read "a per diem for expenses not to exceed fifteen dollars."

Chapter X. Section 5—second line—delete the word "ten" and substitute "twelve" making it read "The Committee on Economics shall consist of twelve members, including the Chairman."

Chapter X. Add new Section 15—

Completion of Work—in all cases where certain work is being performed or problems studied by Standing or Special Committees, such work or study shall not be considered finished when the tenure of office of such Committee ends but shall

be continued by the succeeding Committee.

Respectfully submitted,

FREDERIC E. SONDERN

SAMUEL J. KOPETZKY

DANIEL S. DOUGHERTY, *Chairman*

April 1, 1935

REPORT OF FIRST DISTRICT BRANCH

To the House of Delegates; Gentlemen:

On June 6, 1934, in New York City the Executive Committee of the Branch held a meeting to prepare the program of the annual fall meeting. The full Committee was present and after wide discussion it was agreed that "Medical Welfare Administration" should be the subject for the meeting. It was decided to have the meeting in Peekskill because of its central location and to begin the program at 4:00 o'clock to make it possible for more men to attend without too great a sacrifice to their work.

The annual meeting on October 24 was attended by a hundred members who were enthusiastic about the program.

Dr. Bedell, President of the State Society, gave the branch some very good points on how to evaluate some of the State Board of Health's report on infant mortality.

Dr. Lawrence, Executive Officer of the State Society, in a clear and concise form told of the method of administration of the TERA law. He showed many interesting slides to illustrate his points.

Following dinner Dr. Squire gave a most entertaining and enlightening address about some of his experiences as County Medical Examiner of Westchester. He stressed especially the need for censorship of the newspapers and movies, and urged the doctors to encourage such movements among the young people as the Boy Scouts.

A new activity, the result of a resolution of the Council, was launched on February 7, 1935. This project aims to bring together organized groups which exist within the First and Second Districts. A committee consisting of one member from each of the component County Societies of the First District was appointed by the President: Dr. Aaron Sobel, Dutchess-Putnam; Dr. Earl C. Waterbury, Orange; Dr. George M. Richards, Rockland; Dr. Edwin C. Podvin, the Bronx; Dr. Samuel J. Kopetzky, New York; Dr. William C. Buntin, Richmond; Dr. Walter W. Mott, Westchester.

This committee has met with a similar committee of the Second District Branch and Dr. Kopetzky and Dr. Waterbury have been appointed chairman and secretary, respectively. Three sub-committees, as follows, were also appointed: Socialized Insurance Questions: Drs. Warren, Sobel, Bauer; Industrial Questions: Drs. Podvin, Steffen, Buntin; Officials (Health, Insurance Company, State Board, School and Laboratory): Drs. Mott, Richards, Payne.

I wish again to thank all the officers and members of the First District Branch for their attendance and co-operation during 1934-35.

Respectfully submitted,

C. KNIGHT DEYO, *President*

April 1, 1935

REPORT OF SECOND DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The component County Societies and Membership have exhibited during the past year an increasing interest and support in all activities of the Second District Branch. All regular and special committee meetings have had excellent attendance.

The Annual Meeting which was held at the Garden City Hotel, Garden City, November 15, 1934, had an attendance of more than two hundred. A complete report of the meeting has been previously published in the JOURNAL. [34:1036, 1934.]

The afternoon scientific session with

several very interesting exhibits proved to be a very popular feature and it is recommended that this be continued as part of the regular program of the annual meeting.

The Annual Dinner was likewise very well attended. The address, "Is the Physician Prepared?", which was delivered by the President of the Medical Society of the State of New York, Dr. Arthur J. Bedell, was a timely, thoughtful, and scholarly presentation and has stimulated careful consideration and comment. [For this address cf. JOURNAL 34: 993, 1934.]

Dr. Frederic E. Sondern, who had just returned from England, spoke on National Health Insurance in England. The facts presented with their possible relationship to impending National and State legislation, made his address of great interest and thought.

Mr. Mathew D. Woll, third vice-president of the American Federation of Labor, spoke on "Labor Looks at Medicine." Mr. Woll's address was carefully considered and most gratefully received. The Branch wishes to extend to Mr. Woll its sincere appreciation and gratitude for his efforts and time. It is hoped that many of his desires and recommendations may be realized in the relationship of organized labor and organized medicine.

Kings County has had an excellent scientific program of well-diversified subjects very ably presented. The standing committees have been most fortunate in the selection of their membership, and the results which they have accomplished have been of the greatest assistance, not only to the Society, but also to the Branch. The Society as a whole forms a well-constructed, carefully managed unit of organized medicine.

Queens County has been exceedingly successful during the year. A great deal of time and consideration have been given to scientific work, development of a Medical Library, and Postgraduate Medical Education. Here, again, most excellent work has been accomplished by the standing committees. The County Society has through delegated members developed the staff and medical management of the new Queens Borough Municipal Hospital which is about to be opened. The

Society is to be congratulated upon its attainment. The co-operation which has been shown in the work of the Branch is duly appreciated.

Suffolk County Medical Society has likewise devoted much effort to its scientific progress. The Medical Economics Committee reports that arrangements have been strengthened with the County Welfare Commissioner and the physician regarding the remuneration for the medical care of the indigent cases, and the arrangement is working out quite satisfactorily.

The Medical Economics Committee and Public Relations Committee have been meeting with some of the school boards to establish a uniform and satisfactory fee schedule for the medical examination of school children. A marked improvement has been noted. The Committees on Public Health and Graduate Medical Education have given their support to the enlargement of the County Tuberculosis Sanatorium, with the result that two new fireproof buildings are now under process of construction.

The Society has endorsed principles and fee schedules for the care of welfare cases. Its committee also recommends that an outline for postgraduate medical education be adopted, and that the State Department of Education appoint only members of a County Medical Society as school medical examiners.

The Suffolk County Health unit continues to function in co-operation and with the support of the County Society. Suffolk County Society has rounded out a year well identified by its medical economics, public health and public welfare work.

Nassau County has unquestionably had the most active year in its history. Never before has so much been accomplished as is now being accomplished under the present administration and was accomplished under last year's administration.

Legislation. Last year's Legislation Committee established a precedence by sending a letter to the candidates for major offices who were in position to influence legislation favorably or unfavorably to the profession, asking their attitude on basic legislative problems.

This year's Legislation Committee has established strong contact with the various legislators.

Public Health. The Public Health Committee has continued its diphtheria preventive activities and is now engaged in a quiet campaign to promote the use of the Sauer vaccine against whooping cough with the idea of laying the foundation for some later activities along this line directed to the lay public.

Professional Advisory Committee. Since July of last year the medical profession has had an opportunity to assist in the determination of policies in the matter of medical relief to the indigent. Many improvements have been effected in the local situation by clearing up misunderstandings and eliminating unnecessary routine.

Medical Economics. This committee sponsored an open meeting in December of last year which was very well attended by society members and resulted in a frank and profitable discussion of many economic problems. This year the committee has been most active and is succeeding in several quarters in solving some of the problems of the clinic and other economic matters of interest to the profession.

Postgraduate Education. Aside from the scientific session of the Society,

arrangements have been made in the last year to have a general invitation extended to all medical men to attend the staff meetings of each of the hospitals in the County, and notices of these meetings have been included in the monthly publication. The major postgraduate opportunity is the Nassau County Tumor Clinic which was organized on a co-operative basis by the Society and the lay committee of the American Society for the Control of Cancer. The clinic continues to see about thirty new patients per month, all of whom are referred by practicing physicians, and has continued to hold weekly conferences open to any physician, where the new cases are discussed and interesting follow-up cases are presented for study.

Membership. The Society has succeeded admirably in retaining its members in spite of the financial difficulties.

In conclusion the President wishes to extend to Dr. Alec N. Thomson, the Secretary and Treasurer of the Branch, his thanks and appreciation for the work and keen interest and thoughtful advice and consultation which he has so cheerfully given.

Respectfully submitted,

LOUIS A. VAN KLEECK, *President*

April 1, 1935

REPORT OF THIRD DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The Third District Branch, which is composed of the Counties of Albany, Columbia, Greene, Rensselaer, Schoharie, Sullivan, and Ulster, comprises an area of over 125 miles long and 70 miles wide having a membership of 562.

With the evident changing relationship of the medical profession to the public and to the State, it would seem that the District Branch will be needed more than ever as the connecting link between the Medical Society of the State of New York and the County Medical Society.

The address, given by Arthur J. Bedell, M.D., President of the Medical Society of the State of New York, at the Annual Meeting of the Third District Branch, was evidence of the clarifying, useful, and valuable application of this relationship to the profession.

In compliance with a resolution by the Council on December 13, 1934, a co-ordinating committee of the Third District Branch has been appointed. It has seemed best that this committee be composed of all the presidents of the County societies of the Third District Branch with the President of the Branch as the chairman.

There have been no differences to be composed and the profession of this District as a whole are of one mind and not at variance with the views of the State Society.

At the request of the Committee on Trends in Medical Practice of the State Society, the Third District Branch has appointed within the district a small committee on Trends in Medical Practice.

Some County societies of the Third District Branch have availed themselves

of one or more of the postgraduate courses offered by the Committee on Public Health and Medical Education of the Medical Society of the State of New York. These rural Counties are hopeful that this activity of the State Society will be continued.

Throughout the Third District there has been greater activity than ever in pre-school vaccination, immunization and physical examinations and the T. B. testing of school children of high-school age.

Albany and Sullivan Counties have had meetings at which there have been guest speakers of prominence.

The symposium on the Columbia County Health Unit presented at the annual meeting of the Third District Branch and published in the JOURNAL issue of December 15, 1934, evidently created much interest and favorable comment. The JOURNAL of October 15, 1934, commenting on this symposium, says: "These three talks show that a County Society and a County Department of Health can pool their knowledge, their thoughtfulness and their energies in harmonious fashion to preserve the health of the citizens of the county at its highest level."

There have been many inquiries, and committees from other Counties in the State have investigated its operation.

The annual meeting of the Third District Branch was well attended. The program has been published in the JOURNAL.

At the annual meeting, Luther C. Payne, M.D., of Liberty, was elected President. On March 16, 1935, Luther C. Payne, M.D., passed to the Great Beyond. Dr. Payne will be greatly missed, both personally and as an efficient and interested officer. Augustus J. Hambrook, M.D., of Troy, who was elected First Vice-President, will officiate as President.

It is sincerely hoped for that more Counties of the Third District may be induced to hold more frequent meetings of their respective County societies.

The report of the Third District Branch cannot be better summarized than in a letter from a secretary of one of its Counties who said of his County: "Better programs, better attendance, closer co-operation, harmony, and peace prevail."

Respectfully submitted,

CLARK G. ROSSMAN, *Councilor*
April 1, 1935

REPORT OF FOURTH DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The work of the Fourth District Branch has continued along the lines of last year, with particular emphasis laid upon need for extension of the post-graduate courses for the Counties, and a better understanding between the County Medical Societies and the County Welfare Officers.

To further the latter object a conference was held last Spring in Elizabethtown which was attended by representatives of all the Counties except one in the District. The President of each County Society, the Chairman of the Economic Committee, and one or two prominent physicians and surgeons from each County were asked to attend. The County Medical Welfare problem was discussed and an effort made to equalize, as far as practicable, the fees charged for indigent cases in the different Counties of the District.

The problem has been taken up by

the different County Societies with the result that all of the Counties of the District except two have some definite understanding with their respective County Welfare Commissioners concerning fees paid for medical services rendered the indigent of the County. Several Counties have a rather complete schedule of such fees while other Counties have more or less of a general understanding with their Welfare Commissioner. Perhaps in none of the Counties is the arrangement all that could be desired, and some are very inadequate, but a good beginning has been made in the direction of relieving the physicians and surgeons of the ever-increasing burden of caring for the indigent. In some of our communities one-third of all hospital patients belong to this class, making the burden an impossible one financially for the profession.

The District Branch meeting was held in September in Gloversville. The Fulton

County Medical Society gave us a wonderful demonstration of hospitality and efficiency. Everything possible was done for the comfort and convenience of their guests.

A program of unusual merit was presented including our State President, Dr. Arthur J. Bedell, Commissioner of Health of New York State, Dr. Thomas Parran, Jr., Dr. Edward M. Livingston of New York City, Dr. Edwin M. Jameson of Saranac Lake, Dr. Wardner D. Ayer of Syracuse, Dr. Richard B. Cattell of the Lahey Clinic, Boston, Dr. William J. Kennedy of Gloversville, and Dr. Herman O. Mosenthal of New York City.

Contrary to some sentiment expressed

at the last State Medical Meeting, the writer feels that the District Branch has a very definite place. He feels however, that the District Branches might function much more efficiently and be of much greater help to the State Society and to the Counties in the District if the President of the State Society could find time at the beginning of each year to coach the District Branch Presidents in the work to be done and to point out special ways in which the District Branch Societies could be of service to the State Society.

Respectfully submitted,

RAYMOND G. PERKINS, *President*

April 1, 1935

REPORT OF FIFTH DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The Annual Meeting of the Fifth District Branch was held in Syracuse on Tuesday, October 2, 1934, with an attendance of more than two hundred and fifty. The meeting was opened with an address of welcome by the President of the Onondaga County Medical Society.

Dr. Bedell, President of the State Society, gave an address in which he drew attention to what the State Society was doing to improve the professional equipment of its members and the application of the TERA to the individual practitioner.

An interesting scientific program followed in which papers were presented by Drs. Frederick H. Flaherty, Leon H. Cornwall, Thomas T. Mackie, Mortimer W. Raynor; Dr. Elliott P. Joslin of Boston spoke on "Pregnancy in Diabetics."

The evening session consisted of a Symposium on the "Importance of Vitamins in Foodstuffs" which was opened with a paper by Dr. Frederick F. Tisdell of Toronto, Canada. The discussion which followed was of great interest as it included the point of view of the dental as well as the medical profession.

The resignation of Dr. William A. Groat as President, in order to render valid his election as Chairman of the Committee on Scientific Work, was accepted with deep regret. The First

Vice-president, Dr. LeRoy F. Hollis, succeeded to the office. The Fifth District Branch is one of the largest branches in area in the State and is composed of the Counties of Herkimer, Jefferson, Lewis, Madison, Onondaga, Oneida, and Oswego.

The County Medical Societies in these different Counties have been holding their regular meetings and have been well attended. Several of the Counties are holding monthly meetings which have created an unusual amount of interest among the physicians.

I was asked by the President to appoint a Committee from the different counties composing the Fifth District Branch to co-operate with the Committees from the other district branches, which I did. It consists of Dr. D. G. Gregor, 500 Woolworth Building, Watertown, from Jefferson County. Dr. S. M. Burns, 31 East 4th St., Oswego, from Oswego County. Dr. Charles D. Post, 608 East Genesee St., Syracuse, from Onondaga County. Dr. F. Edward Jones, Beaver Falls, from Lewis County. Dr. Wm. S. Brady, 1817 Genesee St., Utica, from Oneida County. Dr. Fred C. Sabin, 23 North Ann St., Little Falls, from Herkimer County and Dr. Nelson Brooks, 311 Broad St., Oneida, from Madison County.

Respectfully submitted,

LEROY F. HOLLIS, *President*

April 1, 1935

REPORT OF THE SIXTH DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The Counties comprising this Branch have been active along a number of lines of work. The membership in the County Societies comprising the Sixth District numbers 458. This membership is distributed over a large area, there being nine Counties in this District. They have been active in preventive medicine without exception.

Six out of the nine Counties availed themselves of postgraduate lectures and in only one County did the attendance at these postgraduate lectures fall below 50 per cent. The average attendance computed on membership was 62 per cent. In one County the attendance at the postgraduate lecture actually exceeded the County membership. Although this would not seem adequate in populous districts, when it is recalled that many of the members are obliged to drive many miles, this record is not bad and it seems shows appreciation for what the State Society is attempting to do for them.

Two of the Counties in this District have County Health Units; that of Cortland County has been in existence five years. Two-thirds of our District carry on cancer publicity campaigns. Seven out of the nine have preschool clinics.

Practically all of the Counties have been active in conducting periodic health examinations and all of them have had diphtheria prevention campaigns, some of the Counties not having had diphtheria for two years or more. In the City of Cortland 47 per cent of the preschool children have been immunized against diphtheria. In the County this runs somewhere between 25 and 30 per cent. Among the children who are in school in Cortland County, slightly more than 50 per cent have been immunized.

Three of our County Societies meet monthly, four quarterly, and two semi-annually. It does not seem that quarterly or semi-annual meetings would be satisfactory. It would seem that in order to keep a County organization really alive, they should meet monthly. If it is

claimed that the distance which has to be traveled is too far, this objection could readily be overcome by holding the County meetings at places which would be most accessible to the greatest number in the County.

It would seem also that no County should go without postgraduate lectures. Since one-third of the Counties in our District did not have them, it might be well for them to join with some neighboring County if it is felt that their numbers are too small. Of course, everyone has time to attend medical meetings if they are interested. Furthermore, the question of distance is no longer a valid excuse inasmuch as our County highways are now so vastly improved. The postgraduate lectures which the State Society has made possible have already done much good and are capable of doing a great deal more. More of the Counties should avail themselves of this privilege.

All of the Counties are receiving some pay for the care of indigent cases, but in 90 per cent of our Counties arrangements along this line are still unsatisfactory.

The Counties have been active in support of what they considered sound legislation opposing that which seemed unsound.

The annual meeting of the Branch was held in Cortland, on September 26, 1934. There were present at this meeting 225, representing a fraction less than 50 per cent of the total County memberships in this District. In addition to the President, Dr. Arthur J. Bedell, who addressed the group on the work of the JOURNAL, there were present either as speakers or guests of honor, ex-presidents Dr. Martin B. Tinker, Dr. William D. Johnson, Dr. Frederick H. Flaherty, Dr. Arthur W. Booth, and Dr. Donald Guthrie, President of the Pennsylvania State Medical Society.

Respectfully submitted,

J. E. WATTENBERG, *President*

April 1, 1935

REPORT OF SEVENTH DISTRICT BRANCH

To the House of Delegates; Gentlemen:

The Twenty-Eighth Annual Meeting of the Seventh District Branch of the Medical Society of the State of New York was held on Thursday, September 27, 1934, at the Auburn Country Club in Auburn.

In preparing the program, the question was raised as to whether speakers should be selected from among men of wide reputation or whether an opportunity should be given members of the profession in the District to prepare papers. The wisdom of the Committee's decision for the former plan was justified by a most excellent attendance in spite of the fact that Auburn is in no sense centrally located in the District.

Dr. Arthur J. Bedell, President of the Medical Society of the State of New York, in addressing the District emphasized the importance of each County Society co-operating with the local Welfare Officers in an effort to establish facilities for the medical care of the indigent. He pointed out that no general plan had been formulated and, conse-

quently, each Society must adopt the plan best suited for its local needs.

Dr. Russell L. Cecil gave a most interesting summary of the modern conception of arthritis with special emphasis on treatment.

Dr. Harrison S. Martland talked on Common and Unusual Heart Lesions, illustrating his remarks with interesting lantern slides.

After luncheon, Dr. Frank Lahey addressed the District Branch on the Management of Gastric Lesions, Peptic Ulcer, and Malignancy. Dr. Lahey's remarks were expressed in his usual clear and logical manner which makes his talks so interesting and practical for the general practitioner as well as the surgeon.

Dr. Foster Kennedy changed the subject of his address from Recent Advances in Neurology to Epilepsy. He presented a new and most interesting conception of epilepsy.

Limited time made it impossible to open these papers for general discussion.

Respectfully submitted,

ALFRED K. BATES, *President*

REPORT OF EIGHTH DISTRICT BRANCH

To the House of Delegates; Gentlemen:

Following a Spring conference between the Executive Officer and representatives of component Counties, Jamestown was selected for the 1934 annual meeting which was held in October. Dr. Malcolm H. V. Cameron, president of the Toronto Academy of Medicine, presented the program feature on the topic of gallbladder disease. Dr. Wallace B. Hamby with the aid of unusual slides brought the subject of neurosurgery up to date. Dr. Joseph S. Lawrence expounded the public welfare law. Complaint was registered by members that no opportunity was afforded for the discussion of medical relief at this meeting. Niagara County sent resolutions requesting the TERA to lay down rules and regulations requiring welfare departments to designate the family physician or physician-of-choice instead of part-time political appointees to care for the indigent sick; but the length of the program prevented consideration of this subject. This was unfortunate because of a feeling in many quarters that leav-

ing such matters for negotiation between local County societies and local welfare commissioners had proven a dismal failure in the more populous centers. Whereas promulgation of such a requirement by a central authority such as the Director of the TERA as a condition of the TERA approving refund to the cities by the State and Federal government would immediately accomplish what local negotiation has failed to accomplish in the five years the new public welfare law has been effective.

One regular meeting of the Council was attended. At the close of the year 1934 the officers and committees of the State Society were assembled to co-relate activities.

During the early months of 1935, Niagara County provided funds for supporting activity in favor of the enactment of a medical-lien law in this State. Meetings of the Counties of Erie and Orleans were attended with excellent co-operation from each.

Respectfully submitted,

R. H. SHERWOOD, *President*

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MEDICAL SOCIETY OF THE STATE OF NEW YORK

ANNUAL MEETING, ALBANY, MAY 13, 14, 15

House of Delegates

The regular Annual Meeting of the House of Delegates of the Medical Society of the State of New York will be called to order at 10:00 A.M., Daylight Saving Time, on Monday, May 13, 1935, in the Hotel Ten Eyck.

SAMUEL J. KOPETZKY, *Speaker*
DANIEL S. DOUGHERTY, *Secretary*

Annual Meeting

The Annual Meeting of the Medical Society of the State of New York will be held on Tuesday, May 14, 1935, at 7:00 P.M. in the Hotel Ten Eyck.

ARTHUR J. BEDELL, *President*
DANIEL S. DOUGHERTY, *Secretary*

Registration

The Hotel Ten Eyck will be the general headquarters. Registration for Delegates will be held on Monday morning, May 13, from 9:00 o'clock; for members on Monday, Tuesday, and Wednesday, May 13, 14, 15, from 9:00 A.M. to 6:00 P.M.

Exhibits

Scientific and Technical Exhibits will be located in the Hotel Ten Eyck.

Scientific Sessions

General Sessions on Tuesday and Wednesday afternoons. Section meetings on Tuesday and Wednesday mornings will be held in the State Capitol.

129th Annual Meeting

Calling the Society to order by the President, Arthur J. Bedell, M.D.

Reading of the minutes of the 128th Annual Meeting by the Secretary, Daniel S. Dougherty, M.D.

Address of Welcome by the Chairman of the Committee on Arrangements, Frederic C. Conway, M.D.

Address of Welcome by the Hon. John Boyd Thacher, Mayor of the City of Albany.

President's address, Arthur J. Bedell, M.D.

Introduction of the President-elect, Frederic E. Sondern, M.D.

The Annual Banquet

The Annual Banquet will be held in the Hotel Ten Eyck, Tuesday, May 14, 1935, at 7:00 P.M. The guests of honor will include the Honorable Herbert H. Lehman, Governor of the State of New York, the President and Secretary of the American Medical Association, and the Presidents of the adjoining State Societies.

Requests for tickets and reservations for tables should be sent to Dr. Edgar A. VanderVeer, Secretary of the Dinner Committee, 28 Eagle Street, Albany. Tickets will be \$3.00.

Delegates Dinner

Dinner for the Delegates will be served in the Hotel Ten Eyck on Monday following the adjournment of the afternoon session of the House of Delegates. Tickets can be procured from the Secretary of the Medical Society of the State of New York, Dr. Daniel S. Dougherty, 2 East 103rd Street, New York City.

Ladies Auxiliary

Special entertainment will be given to the ladies under the auspices of the Ladies Auxiliary of the Medical Society of the County of Albany.

Hotels

A list of the hotels will be found in the JOURNAL and members are advised to make their reservations in advance of the meeting so they will be able to secure the desired accommodations.

Validation of Railroad Tickets

Members holding railroad certificates entitling them to a reduction in return railroad fare must have them signed and validated at the Society's Registration Desk before purchasing tickets for the return trip at the special fare allowed to those attending the meeting.

Scientific Program

All Meetings Will Be Held By Daylight Saving Time

GENERAL SESSIONS

PLACE OF MEETING—STATE CAPITOL, ASSEMBLY CHAMBER

Tuesday, May 14—2:00 p.m.

1. "The Function of the American Medical Association," Walter L. Biering, M.D., President of the American Medical Association, Des Moines, Iowa (invited guest).

2. "Medicine of Today," Olin West, M.D., Secretary and General Manager of the American Medical Association, Chicago, Ill. (invited guest).

3. "Recent Advances in Pathology of the Cardiovascular System," Harrison S. Martland, M.D., Newark, N. J. (invited guest).

Wednesday, May 15—2:00 p.m.

1. "The Treatment of Pneumonia," Arthur F. Chace, M.D., New York.

2. "The Problem of the Broken Hip," John J. Moorhead, M.D., New York.

3. "Facts Concerning the Treatment of Anemia," William P. Murphy, M.D., Boston, Mass. (invited guest).

4. "Hints for Recognizing the Patient who will Probably not be Helped by an Abdominal Operation." Walter C. Alvarez, M.D., Rochester, Minn. (invited guest).

5. "Face Pain," George H. Hyslop, M.D., New York.

THE SECTIONS

[All papers read before the Society by members become the property of the Society. The original copy of each paper shall be left with the Secretary of the Section. Discussers should have their remarks typed and hand them to the Secretary if they wish them published. Section meetings shall begin promptly at the hour specified.]

SECTION ON MEDICINE

Chairman, FRANK BETHEL CROSS, M.D., Brooklyn; Secretary, JOHN S. LAWRENCE, M.D., Rochester; Place of Meeting, State Capitol, Assembly Chamber

Tuesday, May 14—10:00 a.m.

1. "Clinical and Laboratory Aspects of Bacteriemia," George M. Mackenzie, M.D., Cooperstown, and R. M. Pike, Ph.D., Cooperstown (invited guest). Discussion opened by Ruth Gilbert, M.D., Albany, and Oliver W. H. Mitchell, M.D., Syracuse.

2. "Primary Carcinoma of the Lung," Lewis F. Frissell, M.D., New York. Discussion opened by Henry M. Moses, M.D., Brooklyn, Leila C. Knox, M.D., New York, and Byron Stookey, M.D., New York.

3. "The Application of Diagnostic Criteria to the Treatment of the Anemias," Frank H. Bethell, M.D., Ann Arbor, Mich. (invited guest). Discussion opened by William P. Murphy, M.D., Boston, Mass. (invited guest), Ellery G. Allen, M.D., Syracuse, and L. Whittington Gorham, M.D., Albany.

4. "The Treatment of Gastroduodenal Ulcers as an Office Procedure," Anthony Bassler, M.D., New York. Discussion opened by Harry L. Segal, M.D., Rochester, and I. Harris Levy, M.D., Syracuse.

Wednesday, May 15—9:00 a.m.

1. "Why Vaccines Fail," C. Ward Crampton, M.D., New York. Discussion opened by Charles H. Hitchcock, M.D., Syracuse.

2. "A Critical Study of the Value of a 'Cure Regime' in the Treatment of Coronary Disease," Carl R. Comstock, M.D., Saratoga Springs. Discussion opened by Walter S. McClellan, M.D., Saratoga Springs, and L. Whittington Gorham, M.D., Albany.

3. "The Diagnostic Significance of Gallop Rhythm," C. Saul Danzer, M.D., Brooklyn. Discussion opened by William

D. Stroud, M.D., Philadelphia, Pa. (invited guest) and Edwin P. Maynard, Jr., M.D., Brooklyn.

4. "An Appraisal of Induced Pneumothorax in the Lobar Pneumonias," Jesse G. M. Bullowa, M.D., New York.

Discussion opened by Edward C. Reifenschein, M.D., Syracuse, Edgar Mayer, M.D., New York, James B. Amberson, Jr., New York, Milton B. Rosenblüth, M.D., New York, Joseph R. Wiseman, M.D., Syracuse.

SECTION ON SURGERY

Chairman, EDGAR A. VANDER VEER, M.D., Albany; *Secretary*, JOHN C. BRADY, M.D., Buffalo; *Place of Meeting*, State Capitol, Assembly Parlor

Tuesday, May 14—10:00 a.m.

1. "The Association of Fractures and Paget's Disease. (Osteitis Deformans)," Clarence A. Traver, M.D., Albany. Discussion opened by William P. Howard, M.D., Albany.

2. "The Mikulicz as Opposed to the One Stage Operation for Carcinoma of the Colon," C. V. Burt, M.D., New York. Discussion opened by Chas. Gordon Heyd, M.D., New York.

3. "Principles Underlying Surgery for Cancer of the Face," Herbert Willy Meyer, M.D., New York. Discussion opened by William J. Hoffman, M.D., New York.

Wednesday, May 15—9:30 a.m.

SYMPOSIUM: "Surgery of the Chest"

1. "Surgical Treatment of Empyema," Howard Lilienthal, M.D., New York.

2. "Intrapulmonary Suppuration and Cancer of the Lung," Carl Eggers, M.D., New York.

3. "The Surgical Treatment of Anterior and Posterior Mediastinal Tumors," Stuart W. Harrington, M.D., Mayo Clinic, Rochester, Minn. (invited guest).

4. "The Surgical Treatment of Pulmonary Tuberculosis," Frank B. Berry, M.D., New York.

Discussion opened by Edgar W. Phillips, M.D., Rochester, and Donald R. McKay, M.D., Buffalo.

SECTION ON OBSTETRICS AND GYNECOLOGY

Chairman, HOWARD C. TAYLOR, JR., M.D., New York; *Secretary*, CHARLES J. MARSHALL, M. D., Binghamton; *Place of Meeting*, State Capitol, Room 332

Tuesday, May 14—10:00 a.m.

1. "The Treatment of Placenta Praevia by Conservative Measures," Ward L. Ekas, M.D., Rochester. Discussion by James K. Quigley, M.D., Rochester.

2. "The Pathology of the Fatal Injuries to the Newborn," William E. Studdiford, M.D., New York. Discussion opened by Frederick A. Hemsath, M.D., New York.

3. "Laboratory Aids in the Diagnosis and Treatment of Pelvic Infections," Thomas C. Peightal, M.D., New York. Discussion opened by Victor W. Bergstrom, M.D., Binghamton.

4. "The Relief of Intractable Cases of Dysmenorrhea by Pelvic Sympathectomy," Frederick S. Wetherell, M.D., Syracuse. Discussion opened by Thomas P. Farmer, M.D., Syracuse.

Wednesday, May 15—9:00 a.m.

1. "The Prognosis of Cancer of the Cervix Treated by Irradiation," Nelson B. Sackett, M.D., New York. Discussion opened by Ira I. Kaplan, M.D., New York.

2. "The Symphysis Pubis and Its Relation to Backache," Milton G. Potter, M.D., Buffalo. Discussion opened by John M. Barnes, M.D., Buffalo.

3. "Types of Pelves Commonly Found in Obvious Endocrine Disturbances," William E. Caldwell, M.D., New York. Discussion opened by D. Anthony D'Esopo, M.D., New York.

4. "The Recurrence of Toxemia of Pregnancy," Alvin J. B. Tillman, M.D., New York. Discussion opened by Edward C. Hughes, M.D., Syracuse.

SECTION ON NEUROLOGY AND PSYCHIATRY

Chairman, JOHN L. ECKEL, M.D., Buffalo; *Secretary*, BYRON STOOKEY, M.D., New York; *Place of Meeting*, State Capitol, Room 424

Tuesday, May 14—10:00 a.m.

1. "A Clinical and Pathologic Study of Alcoholism," Lloyd H. Ziegler, M.D., Albany, and Henrietta C. Horner, M.D., Albany. Discussion opened by Victor C. Jacobsen, M.D., Albany, and John L. Eckel, M.D., Buffalo.

2. "Acoustic Neurinomas in the Stage of Normal Intracranial Pressure," Wallace B. Hamby, M.D., Buffalo. Discussion opened by Byron Stookey, M.D., New York.

3. "Tumors of the Base of the Skull," S. Bernard Wortis, M.D., New York, and Samuel Brock, M.D., New York. Discussion opened by John L. Eckel, M.D., Buffalo, and Lloyd H. Ziegler, M.D., Albany.

4. "A Study of Early Developing Schizophrenia," Eric Kent Clarke, M.D., Rochester, and Daniel B. Peeler, M.D., Rochester. Discussion opened by Lloyd H. Ziegler, M.D., Albany.

5. "A Case of Myasthenia Gravis with Pathological Changes in the Central Nervous System," Charles A. McKendree, M.D., New York, and Abner Wolf, M.D., New York. Discussion opened by Albert G. Odell, M.D., Clifton Springs.

Wednesday, May 15—9:00 a.m.

1. Chairman's Address: "The Place of Neuropsychiatry in a General Hospital," John L. Eckel, M.D., Buffalo.

2. "The Value of the Erythrocyte Sedimentation Rate Determination in Psychiatric Cases," Hugh S. Gregory, M.D., Binghamton. Discussion opened by George C. Bower, M.D., Marcy.

3. "Intracranial Hemorrhage, Its Anatomical Forms and Differential Diagnosis," Joseph H. Globus, M.D., New York. Discussion opened by Aramando Ferraro, M.D., New York.

4. "Acute Encephalomyelitis and Its Relationship to Multiple and Diffuse Sclerosis," Aramando Ferraro, M.D., New York and G. A. Jervis, M.D., New York (invited guest). Discussion opened by Joseph H. Globus, M.D., New York.

5. "Purpura Hemorrhagica with Intracranial Hemorrhage," Paul H. Garvey, M.D., Rochester, and Doran J. Stephens, M.D., Rochester. Discussion opened by Walter O. Klingman, M.D., New York.

6. "Observations on Treatment of Mental Disorders in Small Groups," Eugene N. Boudreau, M.D., Syracuse. Discussion opened by Hugh S. Gregory, M.D., Binghamton.

SECTION ON PEDIATRICS

Chairman, GEORGE C. SINCERBEAUX, M.D., Auburn; *Vice-Chairman*, GEORGE M. RETAN, M.D., Syracuse; *Secretary*, JOHN DORSEY CRAIG, M.D., New York; *Place of Meeting*, State Capitol, Room 342

Tuesday, May 14—10:00 a.m.

1. "Peptic Ulcer in Childhood with Case Reports," Frank J. Williams, M.D., Albany. Discussion opened by Arthur W. Benson, M.D., Troy.

2. "Infant Feeding; Historical Background and Modern Practice," Grover F. Powers, M.D., New Haven, Conn. (invited guest). Discussion opened by Henry L. K. Shaw, M.D., Albany.

3. "A Study of Infant Care in a Rural Community," Marjorie F. Murray, M.D., Cooperstown. Discussion opened by George M. Retan, M.D., Syracuse.

4. "Clinical Results of Anterior Pituitary Therapy in Children," with

Lantern Slide Demonstration, A. Wilnot Jacobsen, M.D., Buffalo. Discussion opened by Murray B. Gordon, M.D., Brooklyn.

Wednesday, May 15—9:00 a.m.

1. "Nephritis in Childhood," Marshall C. Pease, M.D., New York. Discussion opened by Adolph G. DeSanctis, M.D., New York.

2. "Whooping Cough Vaccine as an Immunizing Agent," Louis W. Sauer, M.D., Evanston, Ill. (invited guest). Discussion opened by John Dorsey Craig, M.D., New York.

3. "Whole Blood in the Treatment of

Whooping Cough," William L. Bradford, M.D., Rochester. Discussion opened by John Dorsey Craig, M.D., New York.

4. "Sickle Cell Anemia in a Child of Italian Parentage," Carl Laws, M.D.,

Brooklyn. Discussion opened by Brewster C. Doust, M.D., Syracuse.

5. "The Work of the Joint Subcommittee on the Deaf and Hard of Hearing," Fairfax Hall, M.D., New Rochelle.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

Chairman, GEORGE M. MACKEE, M.D., New York; *Secretary*, LOPO DE MELLO, M.D., Syracuse; *Place of Meeting*, State Capitol, Room 441

Tuesday, May 14—10:00 a.m.

1. "Removal of Nonmalignant Moles, with Final Cosmetic Results," Robert R. M. McLaughlin, M.D., New York. Discussion opened by Harry D. Parkhurst, M.D., Utica.

2. "Sensitivity to Soap Solutions," James W. Jordan, M.D., Buffalo and Earl D. Osborne, M.D., Buffalo. Discussion by John H. Hunt, M.D., Elmira.

3. "The Practical Management of Dermatitis with an Allergic Etiology," Herbert H. Bauckus, M.D., Buffalo. Discussion opened by Leon H. Griggs, M.D., Syracuse.

4. "Burning Tongue," Howard Fox, M.D., New York. Discussion opened by Anthony C. Cipollaro, M.D., New York.

5. "Treatment of Cardiovascular Syphilis," Joseph E. Moore, M.D., Baltimore, Md. (invited guest).

Wednesday, May 15—9:00 a.m.

1. "Lipoidosis Cutis et Mucosae,"

Ralph N. Tripp, M.D., New York. Discussion opened by Paul E. Bechet, M.D., New York.

2. "Tuberculous and Tuberculoid Skin Diseases," Timothy J. Riordan, M.D., New York. Discussion opened by J. Frank Fraser, M.D., New York.

3. "The Field of Dermatology," William Allen Pusey, M.D., Chicago, Ill. (invited guest).

4. "Nails and Their Diseases," Mortimer J. Cantor, M.D., Brooklyn. Discussion opened by Clarence H. Peachey, M.D., Rochester.

5. "The Sources and Symptoms of Arsenical Poisoning from the Standpoint of the Dermatologist," A. Benson Cannon, M.D., New York. Discussion opened by John R. Schermerhorn, M.D., Schenectady.

6. "Cutaneous Calcinosis," Maurice J. Costello, M.D., New York. Discussion opened by Edward R. Maloney, M.D., New York.

SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Chairman, WEBB W. WEEKS, M.D., New York; *Secretary*, JOHN F. FAIRBAIRN, M.D., Buffalo; *Place of Meeting*, State Capitol, Senate Chamber

Tuesday, May 14—9:00 a.m.

Instructional Hour 9:00 A.M. to 10:00 A.M.: "A Study of the Pathology in Cases of Sympathetic Ophthalmia," Bernard Samuels, M.D., New York.

1. "Treatment of Sympathetic Ophthalmia with Antidiphtheric Serum," Frederick H. Verhoeff, M.D., Boston, Mass. (invited guest). Discussion opened by Ben Witt Key, M.D., New York.

2. "Allergy in Its Relation to Sympathetic Ophthalmia," Alan C. Woods, M.D., Baltimore, Md. (invited guest). Discussion by Conrad Berens, M.D., N.Y.

3. "Surgical Treatment of Sympathetic Ophthalmia and Its Complications," John F. Gipner, M.D., Rochester.

4. "A Survey of Cases of Sympathetic

Ophthalmia Occurring in New York State," Harold H. Joy, M.D., Syracuse.

5. "Treatment of Blood Stream Infections with Gold Sodium Chloride," Ivan J. Koenig, M.D., Buffalo.

Wednesday, May 15—9:00 a.m.

Instructional Hour 9 A.M. to 10:00 A.M.: (a) "Anatomy of the Temporal Bone," (b) "Anatomy of the Nasal Sinuses," Edgar Burchell, B.Sc., New York (invited guest).

1. "The Diagnosis of Deafness Based Upon Functional Testing," Clayton M. Brown, M.D., Buffalo. Discussion opened by Chester C. Cott, M.D., Buffalo.

2. "Treatment of Hay Fever and Hyperesthetic Rhinitis by Ionization," Lee M. Hurd, M.D., New York. Dis-

cussion opened by Claude G. Crane, M.D., Brooklyn.

3. "Experimental Findings in Petrisitis," (a) Historical data, Joseph G. Druss, M.D., New York; (b) Pathological find-

ings, Harry Rosenwasser, M.D., New York; (c) Experimental work, Samuel Rosen, M.D., New York. Discussion opened by Isidore Friesner, M.D., New York.

SECTION ON PUBLIC HEALTH, HYGIENE AND SANITATION

Chairman, WALTER A. LEONARD, M.D., Cambridge; *Secretary*, JOHN A. CONWAY, M.D., Hornell; *Place of Meeting*, State Capitol, Room 409

Tuesday, May 14—10:00 a.m.

1. "The New State Tuberculosis Hospitals," Robert E. Plunkett, M.D., Albany. Discussion opened by H. St. John Williams, M.D., Poughkeepsie.

2. "Practical Suggestions for Community Health Education," Gilbert deL. Forbes, M.D., Kendall. Discussion opened by Leo F. Schiff, M.D., Plattsburg.

3. "The Administrative Aspects of Vitamin D Milk Control," Paul B. Brooks, M.D., Albany. Discussion opened by James A. Tobey, D.P.H., New York (invited guest).

4. "Diphtheria Epidemic in a Hospital," James E. Perkins, M.D., Albany. Discussion opened by Frank E. Coughlin, M.D., Albany.

Wednesday, May 15—9:00 a.m.

1. "The Use of Immune Blood in the Prophylaxis of Measles and Whooping Cough," William L. Bradford, M.D., Rochester.

2. "Measles Prophylaxis," Samuel Karelitz, M.D., New York. Discussion opened by Bela Schick, M.D., New-York, and George R. Murphy, M.D., Elmira.

SYMPOSIUM: "Poliomyelitis"

3. "Symptomatology and Treatment of Acute Poliomyelitis," Josephine B. Neal, M.D., New York.

4. "Active Immunization against Poliomyelitis," Maurice Brodie, M.D., New York (invited guest).

5. "General Discussion of Poliomyelitis," William H. Park, M.D., New York. Discussion, G. H. Ramsey, M.D., Albany.

SECTION ON UROLOGY

Chairman, THOMAS F. LAURIE, M.D., Syracuse; *Secretary*, ERNEST M. WATSON, M.D., Buffalo; *Place of Meeting*, State Capitol, Room 437

Tuesday, May 14—10:00 a.m.

1. "Bacteriemia Following Instrumentation of the Infected Urinary Tract," John H. Powers, M.D., Cooperstown. Discussion opened by James H. Borrell, M.D., Buffalo.

2. "Elusive Ulcer of the Bladder with Special Reference to the Use of Phenol," Nathan P. Sears, M.D., Syracuse. Discussion opened by H. Dawson Furniss, M.D., New York.

3. "Modern Renal Surgery," Oswald S. Lowsley, M.D., New York. Discussion opened by Winfield W. Scott, M.D., Rochester.

Wednesday, May 15—9:00 a.m.

1. "The Present Status of the Prostatic Problem," Henry G. Bugbee, M.D., New York. Discussion opened by Arthur H. Paine, M.D., Rochester.

2. "X-ray and Radium Therapy in Diseases of the Genito-Urinary System," George G. Smith, M.D., Boston, Mass. (invited guest). Discussion opened by Benjamin S. Barringer, M.D., New York.

3. "Calculus in the Upper Urinary Tract," Alexander Randall, M.D., Philadelphia, Pa. (invited guest). Discussion opened by Nathaniel P. Rathbun, M.D., Brooklyn.

SECTION ON RADIOLOGY

Chairman, DONALD S. CHILDS, M.D., Syracuse; *Vice Chairman*, LEO P. LARKIN, Ithaca; *Secretary*, JAMES M. FLYNN, M.D., Rochester; *Place of Meeting*, State Capitol, Room 442

Tuesday, May 14—10:00 a.m.

1. "A Study of the End Results in the

Treatment of Cancer Patients with a Report of Approximately 400 Autopsies,"

Ira I. Kaplan, M.D., New York. Discussion opened by Angelo M. Sala, M.D., New York.

2. "Trichobezoar" (Hair-cast of Stomach), Carlton F. Potter, M.D., Syracuse.

3. "The Review of Five Thousand Gastrointestinal X-ray Examinations with a Summary of the Conclusions," Edward C. Koenig, M.D., Buffalo. Discussion opened by Leo P. Larkin, M.D., Ithaca.

4. "X-ray Therapy in Upper Respiratory Infections," Alfred L. L. Bell, M.D., Brooklyn.

5. "Pulmonary Tuberculosis; Serial Roentgen Studies in Superinfections," Henry K. Taylor, M.D., New York. Discussion opened by George G. Ornstein, New York.

Wednesday, May 15—9:00 a.m.

1. "Pneumoconiosis; A Study of Some Five Hundred Cases," Clifford R. Orr, M.D., Buffalo. Discussion opened by Donald R. McKay, M.D., Buffalo.

2. "Radium Therapy," Douglas Quick, M.B., New York. Discussion opened by Burton T. Simpson, M.D., Buffalo.

3. "The Use of the Roentgen Ray in the Early Diagnosis of Infections Caused by Gas Forming Organisms," Leslie R. Lingeman, M.D., Rochester. Discussion opened by Max A. Almy, M.D., Rochester.

4. "The Relationship of Certain Technical Factors in the Roentgenological Examination of the Lungs," Charles C. McCoy, M.D., Cooperstown.

Scientific Exhibit

Hotel Ten Eyck, Mezzanine

Dr. Russell L. Cecil, New York (1. Committee on Public Health and Medical Education, Medical Society of the State of New York; 2. New York State Department of Health; 3. Metropolitan Life Insurance Co.): "*Exhibit on Pneumonia.*"

Description: Charts illustrating: (1) Incidence and death rate of pneumonia in various countries; (2) Incidence and mortality for various types of pneumonia; (3) Results of serum treatment in various types; (4) Demonstration of various typing methods; (5) Motion picture demonstration by Dr. Jesse Bullowa, "The Management of Pneumonia."

Dr. Jesse G. M. Bullowa, Littauer Pneumonia Research Fund of New York University, New York: "*Management of Pneumonia.*"

Description: Three charts showing typing methods, etc. Pneumothorax statistics. Neufeld typing demonstration. Film by Dr. M. B. Ferderber.

Dr. John C. A. Gerster, New York City Cancer Committee (American Society for the Control of Cancer), New York: "*Health's Highways*"

Description: A series of charts, comprising photographs, drawings and text,

designed to show the accomplishments in medical research, from earliest times, with especial reference to advances in cancer therapy. Particular stress is laid on those achievements which have been the result of animal experimentation.

Dr. Irving Gray, Brooklyn: "*Treatment of Lead Poisoning*"

Description: Measures in the therapeutic and dietetic management of patients ill with acute, subacute, and chronic lead poisoning will be displayed. Procedures in the treatment will be outlined.

Dr. J. Thompson Stevens, New York: "*Result of Radiotherapy and Electrosurgery in Accessible Malignancies*"

Description: Photographs before and after treatment in accessible malignancies, cases which were alive and free from malignant disease for five years and longer.

Drs. Jane Sands Robb, J. G. Fred Hiss, and Robert Robb, Syracuse University: "*Further Studies on Coronary Distribution in Human Hearts*"

Description: Dissections of injected human hearts have been made to demonstrate the muscular architecture of the ventricles and the blood supply to these

muscles. Electrocardiograms showing the application of this data to studies in condition are at hand.

Dr. G. Allen Robinson, New York: *"The Radium Treatment of Hemangiomas"*

Description: Classification of types of vascular tumors occurring in children. Dosage and technic of radium application. Results obtained in a large series of cases will be shown.

Dr. Wardner D. Ayer, Syracuse University: *"The Aneurysm of the Circle of Willis and Spontaneous Subarachnoid Hemorrhage"*

Description: Twenty photographs with epitomized histories.

Dr. Lee A. Hadley, Syracuse University: *"Apophyseal Subluxation; Disturbances in and about the Intervertebral Foramen Causing Back Pain"*

Description: Conditions causing both local and referred pain are illustrated by anatomical specimens, microscopic sections and x-ray films.

Dr. Frederick S. Wetherell, Syracuse University: *"Surgery of the Sympathetic Nervous System; Its Application to Various 'Medical' Conditions"*

Description: A number of anatomical dissections of various ganglionated trunks and plexuses will be shown. Case histories of patients on whom various sympathetic nerve operations have been performed will be shown on placards. A moving picture of the operation for removal of the superior hypogastric plexus (presacral nerve), as applied for the relief of pelvic pain, will be projected.

New York State Medical Library, Albany: *"New York State Medical Library"*

Description: Posters. Also the New York State Medical Library cordially urges all of the members of the Medical Society of the State of New York to visit their library in the Education Building. There are over 40,000 volumes in the Medical Library and over 500 periodicals are received currently. Special

books are sent to the borrower on request or selected material will be sent if the subject desired is given. This service is extended, without charge, to physicians and nurses registered in New York State. The only obligation imposed on the borrower is the payment of the transportation charges both ways.

Dr. Burton T. Simpson, State Institute for the Study of Malignant Diseases, Buffalo: *"Cancer"*

Description: Transparencies illustrating cases of cancer which have been cured. Models showing the pumping of radon, the radium pack, x-ray machine, and surgery.

Dr. Arthur J. Bedell, Albany: *"Modern Photography of the Eyes"*

Description: The group will include photographs of the face showing gross ocular anomalies, stereoscopic pictures of the external diseases, photographs of cataracts, natural color photographs and stereoscopic fundus photographs dealing especially with the local manifestations of systemic disorders, nephritis, hypertension, diabetes, syphilis, tuberculosis, and brain tumors.

Drs. Bernard Samuels and E. B. Burchell, New York Eye & Ear Infirmary, New York: *"Anatomical Preparations of Eye and Ear; Rare Old Books"*

Description: (1) Eye preparations of macroscopic mounts demonstrating all the familiar eye lesions, including retinitis pigmentosa and neoplasms; (2) Temporal bone, numerous dissections; (3) Early editions, mostly of English and American textbooks.

Drs. Eilif C. Hanssen, Hubbard Lynch, and Charlotte H. Phillips, New York Post-Graduate Medical School and Hospital, New York: *"Diagnosis of Disease of the Gall Bladder"*

Description: Panels showing statistical studies of a control series of 99 patients, compared with groups of medical and surgical cases, each studied by history, chemical blood tests, cholecysto-

grams and biliary tract drainage. Dry model of stomach and biliary tract showing duodenal tube in place. Pathological specimens of gall bladder. Typical illuminated cholecystograms. Complete equipment for biliary tract drainage.

Drs. Albert Pfeiffer, Rudolph Ruedemann, Jr., Thomas F. Laurie, and Kenneth M. Davenport, New York State Department of Health, Albany: *"Clinical Manifestations of Syphilis"*

Description: Strip films and moulages showing lesions of syphilis and allied conditions for purposes of differential diagnosis. Demonstration of the capillary tube outfit for dark field examination of spirocheta pallida.

Drs. Augustus J. Hambrook and Fairfax Hall, Committee on the Deaf and Hard of Hearing, Sub-committee of Committee on Public Health and Public Relations of Medical Society of the State of New York: *"The Hard of Hearing"*

Description: Signs and Panels. Audiometers.

Dr. Samuel Weiss, New York Poly-clinic Medical School and Hospital, New York: *"Gastroenterology; Graduate and Postgraduate Teaching"*

Description: Models, charts and roentgen ray films of normal and pathological gastrointestinal conditions. Apparatus and chemicals for diagnosis and treatment of diseases of the digestive system, including liver, gallbladder and pancreas. Gastroscopy with flexible gastroscope and gastric photography.

Dr. Jacques W. Maliniak, New York: *"Variety in Plastic and Reconstructive Surgery"*

Description: Plastic repair of a variety of congenital and acquired deformities of the face and form is illustrated by means of charts, photographs and casts. The pre- and postoperative results and the surgical technic for some deformities is shown in a motion picture. Special emphasis is placed on the repair in various stages of extensive post-traumatic deformities about the facial cavities. The

importance of functional as well as cosmetic restoration is stressed. Repair in the following deformities will be presented: partial and total rhinoplasty; partial loss of lip; defects of cheek caused by radium burns; secondary cleft lip nose; burn of neck, buttocks and chest; repair of conspicuously enlarged breast hypertrophy.

Dr. William E. Caldwell, Department of Obstetrics and Gynecology, Columbia University and the Sloane Hospital for Women with the assistance of the Roentgen Ray Department of the Presbyterian Hospital, New York: *"Types of Pelves Commonly Found in Obvious Endocrine Disturbances"*

Description: The exhibit will include a minimum of fifteen framed illustrations of the different types of pelves, along with a number of mounted specimens. Case studies of the pelvic shape in primary amenorrhea and other endocrine conditions will be shown by means of roentgenograms, suitably labeled. The x-ray technic used for pelvic studies will also be diagrammatically illustrated.

Division of Laboratories and Research, New York State Department of Health, Albany: *"Laboratory Aids in Diagnosis"*

Description: Data relative to amebiasis. Pneumococcus type differentiation. Collection of duodenal contents. Collection and examination of chancre fluid. Tissue diagnosis (biopsy material). Various diagnostic procedures.

Dr. Albert S. Hyman, Witkin Foundation for the Study and Prevention of Heart Disease, New York: *"Infra-red Photography in the Study of Cardio-vascular Disease"*

Description: Original photographs, charts, diagrams and models illustrating the selective possibilities of infra-red photography in the studies and examination of the superficial blood vessels of the skin. Changes in venous pressure seen in early stages of valvular heart disease may be estimated by infra-red radiation and specialized photography; these changes precede the usual clinical signs

of congestive failure and are of considerable prognostic significance.

Drs. Albert S. Hyman, J. Sante Diasio, and Morris Zimmerman, Witkin Foundation for the Study and Prevention of Heart Disease, New York: "*Trans-Thoracic Electrocardiography*"

Description: Demonstration of the 9-lead hook up. Electrocardiograms made by the conventional three lead method frequently (about 22 per cent) fail to reveal widespread coronary arterial pathology with its associated heart muscle damage. The theory of "silent areas" in the heart is based upon the incomplete expression of the electrophysiology of the Einthoven triangle. The adoption of the cone theory permits three dimensional study of cardiac electrodynamics. The use of the trans-thoracic leads is shown by original diagrams, plates, photographs, models, and electrocardiograms.

Drs. Henry K. Taylor, Solomon Schwartz, and Oscar Auerbach, Seaview Hospital, New York: "*Pulmonary Tuberculosis*"

Description: The exhibit illustrates all types of superinfections and demonstrates the roentgenological application of a clinical classification, where all types are divided into a benign and malignant group. The benign group requires no surgical collapse or therapy measures. The malignant group is the only group where collapse therapy measures are indicated. The roentgen appearance of the chest following the various surgical pro-

cedures are demonstrated. Included are Pneumothorax, unilateral and bilateral; Pneumoclysis, closed; Phrenicectomy; Apicolysis with plombs; Caspar operation; Paravertebral thoracoplasties, all stages; Bilateral upper stage thoracoplasty. Also roentgenograms of sixty cases with deposits in pneumothorax cavities. Mounted pathological specimens to demonstrate practically all lesions visible in roentgenograms.

American Medical Association, Chicago, Ill.: "*Cutaneous Granulomas*"

Description: A collection of about 150 photographs showing cutaneous granulomas which the physician may encounter in general practice.

Dr. Anna Furedi, New York Institute of Clinical and Oral Pathology, Inc., New York: "*Tumors of the Oral Cavity*"

Description: Clinical photographs, x-rays, and microphotographs of cases illustrating the importance of the correlations of clinical findings; x-ray examination and histopathological evidence.

Dr. Simon L. Ruskin, Bronx Hospital, New York: "(1) *Histopathology of Atrophic Rhinitis and Ozena*; (2) *Technic of Blocking the Sphenopalatine Ganglion*"

Description: (1) Transparencies illustrating differential diagnosis histopathologically between atrophic rhinitis and ozena. (2) Transparencies showing anatomy and technic of blocking the sphenopalatine ganglion.

Technical Exhibit

HOTEL TEN EYCK

Albany Surgical Co., Inc., of Albany (members NRA) (Booth 19). This company desires to function with and for the best interests of the medical profession in its effort to serve mankind in proficient and ethical accord. The Albany Surgical Staff and officers heartily welcome members of the Society to visit our store while they are in Albany.

Warren E. Collins, Inc., Boston, Mass. (Booth 6), "Pioneers of Respiration Apparatus," will show the very latest, up-to-date equipment—for the administration of prolonged artificial respiration—for efficient, effective oxygen therapy and simple, accurate metabolic determinations. Demonstrations gladly given.

Coward Shoe, New York City (Booth 18). On display at the Coward booth are many interesting plaster casts of deformed feet. Motion pictures show vividly the foot in action and its requirements for walking . . . also how shoes can be intelligently applied for absolute comfort. Over a 70-year period Coward has contacted practically every form of foot disorder. The result is shown in 79 different lasts for as many differently shaped feet.

Davies, Rose & Co., Ltd., Boston, Mass. (Booth 20), hope that you will visit their headquarters. The preparations that this firm is exhibiting have a world-wide reputation. Physiological or chemical tests are made to assure their standardization. Clinical experience vouches for their dependability. Messrs. R. J. Mansfield and H. V. Orne, who are well known to many of the medical practitioners of New York, will be at the booth to welcome you.

R. B. Davis Co., Hoboken, N. J. (Booth 1). New Food Value Charts (calcium, phosphorus, vitamin D and caloric value) will be available for those who desire same at the booth of the R. B. Davis Company. Visit Booth No. 1 and be served with Cocomalt. This popular food drink supplies rich calcium, phosphorus, Vitamin D content in a particular delicious form.

DeVilbiss Co., Toledo, Ohio (Booth 21), manufacturers of medicinal atomizers, have reserved Space No. 21 for the 1935 convention of the Medical Society of the State of New York to be held May 13, 14, and 15 at the Hotel Ten Eyck, Albany. A complete line of atomizers and vaporizers for both home and professional use will be on display. A prominent feature of the DeVilbiss Exhibit will be the recently developed DeVilbiss Nasal Guard, which prevents any excess pressure in the nasal passages during prescribed self-treatment. E. Manning will be in charge. All delegates to the convention are cordially invited to visit the DeVilbiss display.

Foregger Co., Inc., New York City (Booth 27). Those not already familiar with the carbon dioxid, or filter method of anesthesia may obtain first-hand in-

formation from the pioneer manufacturer of this type of apparatus by visiting the display of the Foregger Company. Oxygen and oxygen-carbon dioxid outfits for therapy and resuscitation are also on display.

E. Fougera & Co., New York (Booth 28). This firm was established in the year 1849. Since then they have devoted their efforts to supplying the medical profession with Swiss, and They invite you Booth 28, Technical Exhibits, and afford their representative an opportunity to explain the merits of the products displayed.

John B. Garrett, Troy (Booth 5). This exhibit will be fitted with the display of the latest Westinghouse achievement, their Shock-Proof X-Ray Equipment, which, incidentally, is priced within the reach of every physician; a complete display showing the entire Bard-Parker line of instruments as well as a full line of pharmaceuticals, suture materials, and surgical dressings.

Gerber Products, Fremont, Mich. (Booth 7). Gerber's new method of Shaker-Cooking will be explained to you at Gerber Products Booth. There are illustrations and charts of this new process and samples open for inspection. Booklets and leaflets are available. Some of these are suitable for distribution by physicians while some are for professional use only.

Harold Surgical Corp., New York City (Booth 22), whose policy it has always been to cater to the complete needs of the physician, will have a very comprehensive exhibit. They will display a complete line of physiotherapy apparatus including diathermy machines, short-wave machines, hot and cold mercury quartz lamps, galvanic and sinusoidal machines. Also a complete line of surgical instruments and diagnostic instruments. They will also have a complete display of Hamilton furniture and other equipment.

H. J. Heinz Co., Pittsburgh, Pa. (Booth 10), creators of the Famous 57 Varieties of Pure Foods, are displaying Strained Foods, Tomato Juice, and Breakfast Cereals especially suited to

Infant Feeding and diet therapy. Do not fail to register for the Heinz Nutritional Charts, a set of reference charts invaluable to the doctor in diet planning.

Intourist, Inc., New York (Booth 25), the Soviet State Travel Company, has prepared an exhibit on Soviet Travel. Information on any aspect of travel in the Soviet Union, as well as free literature, will be offered to physicians in attendance. For the medical profession, travel in the Soviet Union offers more than merely interesting possibilities: There are the famous health resorts of the Crimean Coast and the Caucasus; the organization of public health facilities, the hospitals and clinics, and the various institutions for experimental medicine invite the inspection of American physicians.

Mead Johnson & Co., Evansville, Ind. (Booth 13), will have on exhibit its complete line of infant diet materials including Dextri-Maltose, Mead's Standardized Cod Liver Oil, Mead's Viosterol in Oil, Mead's Cod Liver Oil with Viosterol, Mead's Viosterol in Halibut Liver Oil (liquid and capsules), Mead's Halibut Liver Oil, Mead's Brewers Yeast (powder and tablets), Pabulum, Mead's Cereal, Sobee, Mead's Powdered Protein Milk, Mead's Powdered Lactic Acid Milk, Mead's Powdered Whole Milk, Alacta, Recolac and Casec. There will also be for the examination of physicians a complete line of Mead's services such as "Diets for Children from Four Months to Four Years," height and weight charts, etc., all of which are free to members of the medical profession in any quantity desired. Representatives will be on hand to meet their friends and to discuss the application of any of the Mead products to infant feeding problems.

Kalak Water Co. of New York, Inc. (Booth 24) invites physicians to visit the booth and learn how delicious and refreshing Kalak is when properly served. Obviously, the greatest use for Kalak Water is for routine use in the home when an alkaline water is indicated. It is generally recognized by physicians that the majority of people, and particularly those of sedentary habits, do not drink sufficient water, both for its value as a

food and as an eliminant. Kalak solves this problem, for it combines purity and palatability.

Lederle Laboratories, Inc., New York City (Booth 2). The Lederle exhibit will feature the rapid diagnosis of pneumonia, using Antipneumococcus Typing Serum (Rabbit). They will also show Solution Liver Extract Parenteral for the treatment of pernicious anemia, Gas Gangrene Antitoxin, Erysipelas Antitoxin, Pollen Antigens for Hay Fever, and many other products of interest to the practicing physician.

Mennen Co., Newark, N. J. (Booth 26). This exhibit will again show their two baby preparations—Mennen Antiseptic Oil and Mennen Antiseptic Borated Powder. Last year the Mennen booth was one of the most popular at the Convention; great interest in these two Mennen preparations was shown by those attending. The Mennen Company tell us that they not only will distribute trial sizes of their Antiseptic Oil and Antiseptic Borated Powder, but their very popular line of shaving and after-shave preparations.

Merck & Co., Rahway, N. J. (Booths 8-11). Tryparsamide Merck is the chemotherapeutic agent of choice for the treatment of neurosyphilis. Its use is an office procedure. It is administered intravenously, does not disrupt the patient's daily routine of life, and is inexpensive. Full information can be obtained at the Merck Booth.

Philip Morris & Co., Ltd., Inc., New York (Booth 14). The manufacturers of Philip Morris cigarettes have been studying the effects of smoking on irritation of the mucous membrane of the upper respiratory tract. In the booth, one of its research staff will be available to explain the work and the results obtained. Samples of Philip Morris cigarettes will be distributed.

Mutual Pharmacal Co., Syracuse, N. Y. (Booth 4), will exhibit products of their laboratory. An interesting line of Eye Ointments and new products will be sampled. Physicians are cordially invited to visit the booth.

Radium Emanation Corp., New York City (Booth 8). Our exhibit consists of

applicators used in modern radium therapy, including removable and permanent radon seeds of the composite type with radon under leakproof glass seal. Patented loading slot instruments for implanting seeds. Uterine tubes, cervical applicators, surface plaques, etc., showing methods of filtering radiation.

Sanborn Co., Cambridge, Mass. (Booth 12), announces a new and improved model E-1 METABOLISM TESTER, featuring easy breathing, simplicity of operation and design, and accuracy. Supplied in attractive colors with tables to match. Sanborn Company also announces a redesigned ELECTRIC-PORTO-CARDIOGRAPH, featuring portability and simplicity but still maintaining all essential working parts which contribute to the success of accurate heart testing. See these two up-to-the-minute apparatus at our booth.

Sandoz Chemical Works, Inc., New York City (Booth 3). Our exhibit will feature Council Accepted products: CALGLUCON, in stable, 10 per cent and 20 per cent ampule solution and in palatable oral forms for effective calcium therapy; GYNERGEN, the only product of Ergotamine for uterine hemostasis and the relief of migraine headache; SCILLAREN and SCILLAREN-B, cardiuretic principles of squill; SANDOPTAL, a safe, mild hypnotic for general use.

Saratoga Springs Authority, Saratoga Springs (Booth 29), this year, as for the past three years, will serve Geyser water to the delegates and visitors to the meeting. Geyser is one of the three naturally carbonated mineral waters from the springs at Saratoga Spa which are bottled by the State of New York.

Sorensen Co., Long Island City (Booth 15), will have on display the DeLuxe complete with Coagulator and

Desiccator for all office treatment work. No. 405 Heavy Duty Office Treatment Outfit. Portable Bedside Treatment Outfit No. 65. No. 54 Office Treatment Unit complete with sinus cleanser and tonsil irrigator. Iodine Vaporizer will also be on display for your inspection and comments.

E. R. Squibb & Sons, New York City (Booth 23). Our exhibit will feature several new products recently made available, including physiologically standardized Anterior Pituitary Extract and a new and economical Vitamin A and D preparation. Other Squibb vitamin, endocrine, biological, and arsenical preparations will be on display and competent attendants will be present to discuss these and other Squibb products.

Vegex, Inc., New York City (Booth 16). (Marmite) Exhibit will show from best authenticated data, Vitamin A and the Vitamin B complex needs of man, including nursing, bottle-fed and pre-school children; current feeding tests, showing some factors which increase red blood cell counts; the use of Vegex (Marmite) to determine the intrinsic factor, with authenticated data; and Vegex in alcoholic disorders. Clinical samples with "Vitamins" and literature will be sent to physicians registering.

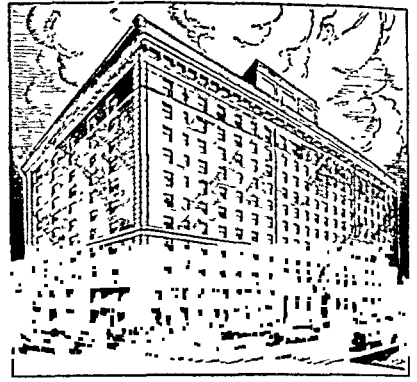
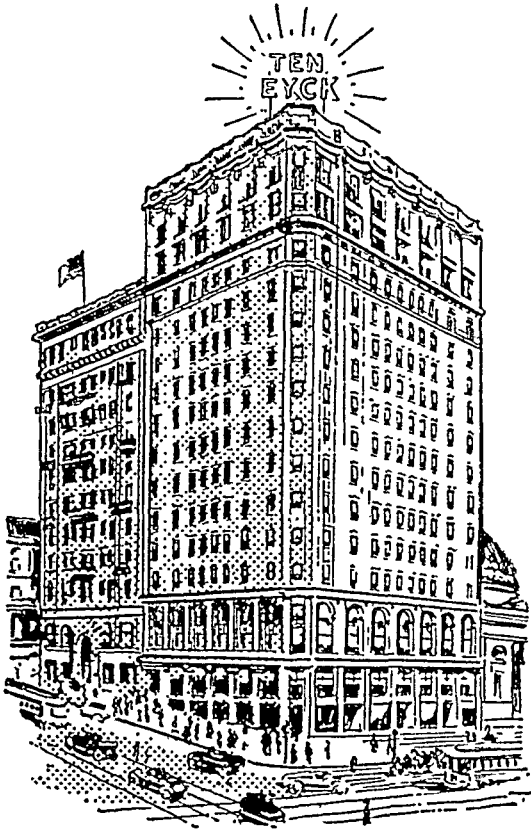
Winthrop Chemical Co., Inc., New York (also successors to H. A. Metz Laboratories), New York City (Booth 17), in addition to presenting their motion picture, "Modern Methods of Anesthesia," will feature recently introduced preparations, such as EVIPAL, hypnotic, NOVALDIN, analgesic, DIODRAST, urographic medium, MEBARAL, antiepileptic and sedative, DEVEGAN, for leukorrhea, etc. Complete details will also be available on well-established preparations such as Salyrgan, Theominal, the Salvarsans, Novocain, Omnadin, and so on.

HOTEL ACCOMMODATIONS IN ALBANY

For your information, the following page lists hotels in Albany most conveniently located to places of meetings. Rates and maximum accommodations are given, along with facilities for the storage

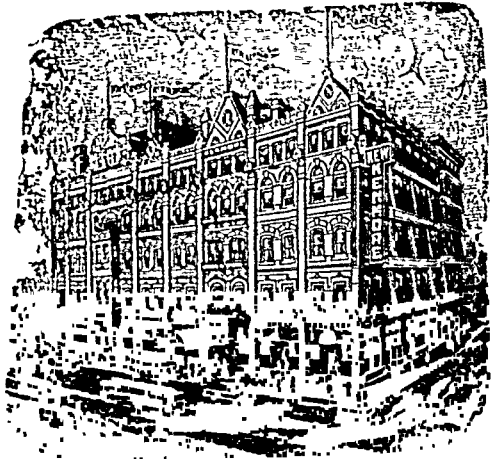
of automobiles. Make your hotel reservations as early as possible, verify your room, and plan to stay in Albany for the entire session. An unusually interesting meeting is anticipated.

HOTEL DE WITT CLINTON, State and Eagle Sts. Total number rooms 400, rate single from \$3.25, double from \$6.00, European plan, all outside rooms, number available, single 60, double 180, garage not included, 75 cents a day. *Manager, Mr. John J. Hyland.*

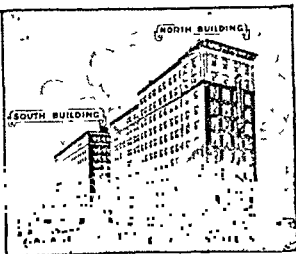


HOTEL HAMPTON, 38 State St. Total number rooms 240, rate single, \$2.50 and \$3.00, double \$4.00 and \$5.00, European plan, all outside rooms, number available about 50%, garage not included, 50 cents. *Manager, Mr. Lehman J. Winters.* Suite for two \$7.00 and \$8.00.

CAPITOL HOTEL, 11 Green St. Total number rooms 184, rate single \$1.50 running water, \$2.00 shower, double \$2.50 running water, \$3.00 bath, European plan, outside rooms, number available 75 to 100, garage not included, 50 cents a day. *Manager, Mr. H. L. Laurie.*



HOTEL TEN EYCK, 87 State St. Total number rooms 400, rate single \$3.00, \$3.50, \$4.00, \$4.50, \$5.00, \$6.00, \$7.00 double \$4.50, \$5.00, \$6.00, \$7.00 double beds, twin beds \$5.00, \$6.00, \$7.00, \$8.00, \$10.00. Suite \$10.00, \$12.00, \$15.00. Number available about $\frac{2}{3}$ each type room, minimum price face court, all others outside rooms, European plan, garage not included, 75 cents a day without service, \$1.00 a day with service. *Manager, Mr. Dewey D. Ellis.*



HOTEL WELLINGTON, 136 State St. Total number rooms 500, rate single \$2.50, \$3.00, \$3.50, double \$3.00, \$4.00, \$5.00, \$6.00, European

plan, all outside rooms, number available 150 to 200, garage not included, \$1.00. *Manager, Miss Joan D. Van Slyk.*

KENMORE HOTEL, 76 N. Pearl St. Total number rooms 300, rate single \$1.50, \$2.00 running water, \$2.50, \$3.00 with bath, double, \$3.00 running water \$4.00, \$5.00 with bath, European plan, outside rooms, garage not included, 50 cents a day. *Manager, Mr. Robert Murphy.*

RALEIGH HOTEL, 134 State St. Total number rooms 50, rate single \$1.75, \$2.50 with shower, double \$4.00, \$3.50, \$4.00 with shower, European plan, outside rooms, number available 20 to 25, garage not included, 75 cents a day. *Manager, Mr. Robert B. Tarsey.*

NEW YORK STATE JOURNAL OF MEDICINE

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GEO. W. KOSMAK, M.D. SAMUEL J. KOPETZKY, M.D.

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EDITORIALS

Proven Worth

Physicians who were in practice prior to 1921 need no reminder of the benefits that have accrued to the profession from the State Society's Group Malpractice Insurance Plan. Fourteen years ago most of the companies had withdrawn from the field and the rates of the few remaining carriers that issued this type of insurance were mounting alarmingly. Even at the prevailing high rates the protection rendered was not always satisfactory for the carriers were more interested in effecting a cheap settlement than in safeguarding the reputation of the insured.

The Group Insurance Plan was the State Society's answer to the demand for adequate insurance and expert defense against malpractice claims at a rate that physicians could afford to pay. The Aetna Insurance Company was the only carrier in the State willing to participate in such an experiment. From the point of view of both insured and insurer, the results have fully justified the venture. The Group Plan is operated at an expense ratio of from six to eighteen per cent less than that of other stock insurance companies in the State; and the physician who has carried a minimum policy for the fourteen years of the plan has enjoyed a saving of \$5.33 a year on his premiums.

It is not merely in a financial sense that the profession has benefited. Through

this plan organized medicine has been better able to combat the growing racket of unjustified malpractice claims, beside directing the management of individual cases. The practice of settling for a "nuisance value" has been abandoned and unfounded charges are fought to the last resort.

At the present time over 57 per cent of the members of the Medical Society of the State of New York place their malpractice insurance with the Group Plan. The enrollment of a still larger proportion of the membership would naturally increase the benefits to all concerned. This is the only scheme of malpractice insurance that protects the doctor morally as well as financially and gives him the privilege of defense by the competent and experienced counsel of the State Society. Rates are the minimum required to conform to legal requirements and provide thorough-going protection. After 14 years of successful operation the Group Plan remains, as a past President characterized it, one of the most important services the Society offers its members.

Example and Warning

The disclosures that have been made in the past few weeks concerning the Emergency Relief Bureau in New York City are at once an example and a warning of what to expect if the practice of

medicine is placed under bureaucratic control. While the physicians employed by the Work Relief Bureau receive pitifully low wages, with no prospects of an increase in the near or remote future, the salaries of many executives have been raised as much as a third. A full time doctor is lucky to receive \$40 for a long, hard week. The director of the recreational division went from \$5,000 to \$6,800 a year in one jump.

This sort of thing is what the profession would have to look forward to under compulsory health insurance. A few lucky executives, principally lay, would receive substantial salaries for comfortable sinecures, while the mass of physicians would have to struggle 10, 12, and 14 hours a day to gross \$40 or \$50 a week.

In *The Forty Days of Musa Dagh* a minister who has escaped from a deportation train describes the difference between the sympathetic help proffered by individuals and the harsh charity dispensed by bureaucratic organizations. An equally great contrast exists between the individualized service rendered by physicians who are solely and directly responsible for their patients' welfare and the perfunctory routine that passes for medical care when the doctor is a subordinate cog in a complicated bureaucratic machine.

No matter how honest and competent the men at the head of organized relief, the story has been the same all over the country: waste, favoritism and inefficiency. Compulsory health insurance would substitute these inevitable attributes of a political bureaucracy for the high standards and proven responsibility of private medical practice.

Dextrose and the Coronary Circulation

It has been said that when a European loses his money, he commits suicide, but when an American is confronted with financial worries, he develops a coronary thrombosis. The marked increase in the incidence of coronary disease in our country not only affords some substantia-

tion for that statement but has, in addition, presented the medical profession with a scientific problem to solve. Consequently, any contribution which affords a means of preventing or alleviating the dread results of this lesion is indeed welcomed by the physician and layman alike.

It was in 1924 that Edwards and Page called attention to the beneficial effect of the administration of dextrose intravenously upon the hypodynamic hearts of dogs suffering from induced hypoglycemia.¹ Other observers² have since shown the relationship between the sugar content of the blood and appearance of anginal pains. Of particular interest in this connection is that these typical cardiac symptoms appeared in diabetics only at a time when they presented a sugar level below that usual for sufferers from that disease.³ It remained for Gibson and Ross⁴ and Sprague and Camp⁵ to present clinical evidence of the efficacy of intravenous injections of dextrose in the treatment of cardiac disease.

Since pharmacological proof is, in the last analysis, the *sine qua non* of a therapeutic remedy, Ginsberg, Stoland, and Loy⁶ have scientifically investigated the effect of dextrose upon the coronary circulation. Their studies were fourfold in nature; the action on the coronary cir-

¹ Edwards, D. J., and Page, I. H.: Observations on the Circulation During Hypoglycemia from Large Doses of Insulin, *Am. J. Physiol.* 69: 177, 1924.

² Strouse, S., Soskin, S., Katz, L. N., and Rubinfeld, S. H.: Treatment of Older Diabetic Patients with Cardiovascular Disease, *J.A.M.A.* 98: 1703, 1932.

³ Middleton, W. S., and Oatway, W. H.: Insulin Shock and the Myocardium, *Am. J. M. Sc.* 181: 39, 1931.

⁴ Smith, F. M.; Gibson, R. B., and Ross N. G.: The Diet in the Treatment of Cardiac Failure, *J.A.M.A.* 88: 1943, 1927.

⁵ Sprague, H. B., and Camp, P. D.: Intravenous Hypertonic Glucose in the Treatment of Cardiac Disease, *New England J. Med.* 206: 288, 1932.

⁶ Ginsberg, A. M., M.D., Kansas City, Mo., and Stoland, O. O., Ph.D., and Loy, David T., M.S., Lawrence, Kan.: Studies on The Coronary Circulation. III. Effect of Intravenous Injections of Dextrose on The Coronary Circulation. *Arch. Int. Med.* 55: 42, 1935.

culation in the whole animal, on the denervated heart-lung preparation, on the innervated heart-lung preparation and the practical application of their findings.

Their work is a distinct contribution to medicine. Their most important findings are that continuous or repeated intravenously administrations of dextrose maintain an increased flow of blood through the coronary circulation; that repeated injections are as efficacious as the first administration of the drug; and finally that there are no noticeable changes in either the heart rate or the blood pressure. They find that the intravenous administration of glucose causes a marked increase in the coronary circulation which is evident over a protracted period without any evidence of untoward physiological reaction.

Their experiments further demonstrate that this beneficial influence is not attributable to either a dilator action on the coronary vessels or a decreased viscosity of the blood. Other solutions, such as isotonic sodium chloride, when injected into the blood, resulted in practically no change in the coronary circulation. Even hypertonic solutions of sodium chloride resulted in only a fractional increase in the coronary circulation.

These observers feel that the results of dextrose therapy cannot be accounted for by the simple explanation of hydremia and lowered blood viscosity. While these are factors to be considered, especially since they have shown that dextrose has no effect upon the coronary vessels themselves or upon the nervous centers, other elements must affect the results obtained by animal experimentation; particularly so since other solutions which alter the blood viscosity and water content have not the same effect upon the coronary circulation as the introduction of dextrose intravenously.

The Maternal Instinct

The continuance of species throughout nature seems to be dependent on the mother instinct. Materialistic, mechanis-

tic philosophies, however otherwise logically developed, have been completely demolished by the use of this magic phrase. Poets throughout the ages have become immortal through song dedicated to this supernatural instinct, and theologians have used it as their supreme argument for proving the existence of a "divine power" working in man.

Other aspects of the analysis of this important question are now opening up and are being subjected to a more scientific rationalization. The Freudian school has rendered excellent service in a very necessary "debunking" process, in throwing grave doubts on the utter perfection of the underlying motives of this "instinct." The pioneer experiments of Riddle¹ and his co-workers have shown that mother instinct may be induced artificially by the injection of the appropriate hormone, dosed to obtain maximum reaction.

By the use of prolactin and follicle-stimulating hormone from the anterior pituitary to arouse the ovaries in immature rats to one full cycle of activity (estrin and progesterone production), and the subsequent injection of prolactin, these investigators were able to reproduce most of the poetical phenomena usually observed. Eighteen virgin rats from four litters, aged 67—81 days, isolated from males from their thirtieth day of life, were injected. The fullest expression of maternal behavior obtainable in these virgin rats consisted in retrieving of wandering young, followed by cuddling, covering the young with the older rat's own body. Nest building, when the nesting material was placed directly over the young, seemed definitely to indicate a true but lower level of development of the maternal instinct. There was obtained a development of high degree in five of the ten cases. The fuller expression of the instinct appeared six days after beginning prolactin treatment in one case, at seven days in one case, at eight days in two cases and at eighteen days in another.

¹ Riddle, O., Lahr, E. L., and Bates, R. W.: *Proc. Soc. Exp. Biol. and Med.* 32: 730, 1935.

With the alarmist reports now circulating about the disappearance of the maternal instinct in modern emancipated women, it is a comfort to realize that this deficiency may soon be remedied at any corner drug store—and that the future of the human race is not imperiled.

The Annual Meeting

The physicians of the State should begin looking ahead to May. During the week of May 12, the annual meeting of the Medical Society of the State of New York will convene at Albany. The House of Delegates meets to decide important issues and determine policy. The considered opinions of County societies expressed in resolutions will receive con-

sideration and action. The membership in the House is truly representative of a cross section of the whole profession in the State:

Interested as most physicians are, in these trying times, with the questions which concern him and his economic position, no less important to him will be the scientific sessions, at which fellow members will present their experiences for the benefit of all. Both the technical and the scientific exhibits will be a course in education well worth studying. Last, but not least, the meeting will afford that opportunity for relaxation, social intercourse and reunion which physicians appreciate more than any other group.

Reserve for yourself, the time to meet with the rest of us, in Albany.

Current Comment

A form of medical poverty is developing as the result of too much state and private paternalism, which results in forcing many to abandon private practice and accept merely a living wage from the state. The property of six physicians has been sold for taxes, and five others, poverty stricken, committed suicide, reports the Paris staff correspondent of the *J. A. M. A.*, January 10, 1935.

Caveat Medicus, says the *Catholic Union and Times* of Buffalo, November 29, 1934. "Socialized medicine and dentistry are nothing more than a communistic conception of the services the state should render to its citizens."

H. Lyons Hunt, Director General of the American Medical Editors' and Authors' Association, in a letter says that there are 750,000 pounds of opium imported into the United States annually. Ten thousand pounds are used legitimately—seven hundred and forty thousand pounds are bootlegged at from one to three dollars a grain.

"Labor is now demanding five hours as a day's work, and will get it if it is within the power of the politician to give it. . . . The injustice of the new social structure is quite evident when you stop to think of it. The man who gets paid for twelve hours and works only five is now beginning to cry out

about 'the high cost of sickness, we must socialize medicine.' It will be a sad day for the sick when the doctor becomes a hireling for the Government—progress, ambition, and individual initiative will cease; the public will receive just what it pays for—*mediocrity*." Thus says Dr. John W. Daniel of Savannah, Ga., former President of the Medical Association of Georgia.

Dr. James F. Rooney of Albany, replying to an editorial in the *New York Times* of March 1, 1935, pleading for fairness on the part of public newspapers, said: ". . . you assure your readers that there will be no outburst that police alone will not be able to quell. 'Our real dangers' you say 'are of another sort.' They lie less in violence or the threat of it, than in a deterioration of public morale, a credulous belief in the ability of the government to give everybody a living, a slow undermining of the principles and methods of our institutions as we have long known them. There are 100,000 physicians in the United States who have expressed themselves through the House of Delegates of the American Medical Association at its Chicago meeting a few days ago, as opposed to health insurance. . . . We have tried, and with fair success, to place the interest of the patient above our own. And the almost unanimous expression of the profession's opinion is against health insurance."

The anti-vivisectionists, in spite of their vicious propaganda and unequalled misrepresentation of facts, have rarely been successful in having legislation passed that would abolish all animal experimentation, says Dr. A. C. Ivy of the Department of Physiology of the Northwestern University Medical School (*Medical Economics*, March, 1935). The next step is to introduce a bill to exempt the dog. Dog exemption is simply an opening wedge.

Dr. H. Sheridan Baketel, editor of *Medical Economics*, calls for action: "... Statements of Policy, Resolutions and Recommendations are only initial steps." He asks a formal statement of association policy as to opposition to health insurance.

All who would inform themselves on the "Veterans Racket" should read I. K. Brown's concise account of the Veterans Racket in the March issue of *Medical Economics*. The medical profession is one of the chief sufferers from "the veterans racket" and it should take an active part in attempts to abolish it. "After more than a decade of exploitation, the doctor must awaken to the fact that in politics, at any rate, he does not serve who only stands and waits."

Now that the measure to end medical abuses under the Workmen's Compensation

Law has been passed and signed, it behooves the County societies to start activity, and the establishment of a fair fee schedule is very important. "*All fees and other charges for such treatment and services shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living,*" states the law. The State Industrial Commissioner is empowered to establish a schedule of fees to be charged by physicians. County Society action should soon be taken to have action conform to the requirements of the law by the Industrial Commissioner.

Even the osteopaths, in annual session of their Eastern Osteopathic Association, reported in the *New York Times* of April 1, warn on state medicine. Dr. Russell C. McCaughan of Chicago, executive secretary, said among other things, "that the public had raised the standards of a physician's education to an almost prohibitive cost, but had at the same time reduced the average doctor's remuneration to a deplorably low level. . . ." He warned against the adoption of a "nation-wide experiment" of state medicine, at a time when it is impossible for people "to think calmly." He warned against socializing of the profession through Health Insurance, because it would lower standards. "The public suffers the consequences in substandard treatment."

CATHOLIC DOCTORS ORGANIZING

The Federated Catholic Physicians' Guild has formed or is planning chapters at Little Rock, Arkansas; Belleville, Illinois; Newark, New Jersey; Wichita, Kansas; Scranton, Pennsylvania; Baltimore, Maryland, and Washington, D. C. Its official journal, the *Linacre Quarterly*, sees the time not far distant when the Guild "will stage a na-

tional convention simultaneous with the American Medical Association's Convention and at the same place."

"Then," the publication says, "it will be possible for the Catholic doctor to become articulate in laying down soundly scientific principles with regard to medical and moral problems."

"GOD'S POOR"

In a strong editorial on clinic abuses the *Rhode Island Medical Journal* remarks that "we do not know very much about 'God's poor.' We do not know how many of them are really poor, how many have radios, autos, good clothes, and go to the movies. In the old days poor people were poor people, now the ward cases have boudoir caps and lace nighties. Hot house flowers adorn the sick room which undoubtedly hastens convalescence and saves the hospital expense thereby. When the patient goes home, a follow-up system sees that medical care is continued and a social worker, *e pluribus unum*, sees that medical care is continued and notes the success of

the operation or treatment. This would be a good time to note, in addition to factors of medical interest, the surrounding conditions such as luxuries, radios and other evidences of well being. Now it may be that this system is in force, but we have never seen such a report. There seems at the present time to be a total disappearance of what used to be called self respect. Where are the poor but proud? The present day mind is an unprincipled mind. Why should I pay for a thing which I can get for nothing? Gone is the type of mind which, when overtaken by sickness, *et cetera*, and scrapes in a small way until he has discharged his financial obligation."

Society Activities

Committee on Legislation—March 28, 1935

PROVISIONS OF MEDICAL ABUSES BILL REQUIRING COUNTY SOCIETY CO-OPERATION

The Governor signed the Medical Abuses Bill today in the presence of a large group of its sponsors, among whom was Dr. Arthur J. Bedell, President of the State Medical Society. The bill which now becomes law will depend in a large measure for its success upon the effective co-operation of the State Medical Society and the component County societies.

The features which relate to the County societies are stated below. It is highly important that every County society should immediately take steps toward carrying out the provisions of the law which are its responsibility.

AUTHORIZATION OF PHYSICIANS

Sec. 13-b. Authorization of physicians by commissioner. 1. The commissioner shall upon the recommendation of the medical society of each County or of a board designated by such County society, or by a board representing duly licensed physicians of any other school of medical practice, authorize physicians licensed to practice medicine in the State of New York to render medical care under this chapter. If, within sixty days after the commissioner requests such recommendations, the medical society of any County or board fails to act, or if there is no such society in a County, the commissioner shall designate a board of three qualified physicians, who shall make the requested recommendations. No such authorization shall be made in the absence of recommendation of the appropriate society or board or of review and recommendation of the industrial council.

PERSONS OTHER THAN PHYSICIANS WHO MAY RENDER MEDICAL CARE

No person shall render medical care under this chapter without such authorization of the commissioner, provided, that:

(a) Emergency (first aid) medical care may be rendered under this chapter by any physician licensed to practice medicine in the State of New York without authorization by the commissioner under this section; and

(b) a licensed physician who is a member of a constituted medical staff of any hospital may render medical care under this

chapter while an injured employee remains a patient in such hospital; and

(c) under the active and personal supervision of an authorized physician medical care may be rendered by a registered nurse, physiotherapist or other person trained in laboratory or diagnostic technics within the scope of such persons' specialized training and qualifications. This supervision shall be evidenced by signed records of instructions for treatment and signed records of the patient's condition and progress. Reports of such treatment and supervision shall be made by such physician to the commissioner on such forms and at such times as the commissioner may require.

FACTS TO BE PRESENTED BY PHYSICIANS SEEKING AUTHORIZATION

2. A physician licensed to practice medicine in the State of New York who is desirous of being authorized to render medical care under this chapter, shall file with the medical society in the County in which his office is located, or with a board designated by such society, or by a board designated by the commissioner. In such application he shall state his training and qualifications and shall agree to limit his professional activities under this chapter to such medical care as his experience and training qualify him to render. He shall further agree to refrain from subsequently treating for remuneration, as a private patient, any person seeking medical treatment in connection with, or as a result of, any injury compensable under this chapter, if he has been removed from the list of physicians authorized to render medical care under this chapter, or if the person seeking such treatment has been transferred from his care in accordance with the provisions of this chapter.

RECOMMENDATION BY COUNTY SOCIETY

The medical society or a board designated by it, or by a board as otherwise provided in section thirteen-b, if it deem such licensed physician duly qualified, shall recommend to the commissioner that such physician be authorized to render medical care under this chapter, and such recommendation and authorization shall specify the character of

the medical care which such physician is qualified and authorized to render under this chapter. A licensed physician may present to the medical society or board evidences of additional qualifications at any time subsequent to his original application. If the medical society or board fails to recommend to the commissioner that a physician be authorized to render medical care under this chapter, the physician may appeal to the industrial council.

WITHDRAWAL OF AUTHORIZATION

Sec. 13-d. Removal of physicians from lists of those authorized to render medical care.

1. The medical society or board that has recommended the authorization of physicians to render medical care under this chapter shall investigate, hear and determine all charges of professional or other misconduct by any authorized physician, or by any compensation medical bureau licensed as herein provided, under rules and procedure to be prescribed by the industrial council of the department of labor and shall report evidence of such misconduct, with their determination thereon, to the commissioner. Such investigation, hearing, report and determination may be made by the board of an adjoining County upon the request of the medical society of the County in which the alleged misconduct or infraction of this chapter occurred. The industrial council of the department may review the determination of such medical society or board, and on application of the physician accused must do so, and may reopen the matter and receive further evidence. The decision and recommendation of such industrial council shall be final, binding, and conclusive upon the industrial commissioner.

CAUSES FOR WITHDRAWAL OF AUTHORIZATION

2. The commissioner shall remove from the list of physicians authorized to render medical care under this chapter the name of any physician who he shall find after reasonable investigation is disqualified because such physician:

(a) Has been guilty of professional or other misconduct or incompetency in connection with medical services rendered under this chapter; or

(b) has exceeded the limits of his professional competence in rendering medical care under this chapter or has made materially false statements concerning his qualifications in his application for the recommendation of the medical society in the County in which his office is located, or of the board designated by it, or of a board as provided in section thirteen-b; or

(c) has failed to submit full and truthful medical reports required to be made by him to the commissioner, or the industrial board; or

(d) has rendered medical service under this chapter for a fee less than fixed by the commissioner as the minimum rate in his locality; or

(e) has participated in the division, transference, assignment, rebating, splitting, or refunding of a fee for medical care under this chapter; or

(f) has solicited, or has employed another to solicit for himself or for another the professional treatment, examination or care of an injured employee in connection with any claim under this chapter.

MEDICAL SOCIETY MAY INVESTIGATE CHARGES

A medical society or board may upon direction of the commissioner or upon its own motion investigate the alleged disqualification, as defined in this section, of any physician whose authorization to render medical care under this chapter it had previously recommended, or the alleged grounds for revocation of the license of any compensation medical bureau whose licensing it had previously recommended. Such physician or bureau shall be notified of the charges against him or it and shall be given reasonable opportunity to be heard and to present evidence in his or its behalf. Upon the completion of its investigation such society or board shall communicate its findings to the commissioner and to the physician or bureau whose conduct was investigated, and shall file with the commissioner a record of the evidence upon which such findings were based.

PAYMENT OF MEDICAL FEES

Sec. 13-f. Payment of medical fees.

(1) Fees for medical services shall be payable only to a physician or other lawfully qualified person permitted by section thirteen-b of this chapter to render medical care under this chapter, or to the agent or to the executor or administrator of the estate of such physician. No physician rendering treatment to a compensation claimant, shall collect or receive a fee from such claimant within this State, but shall have recourse for payment for services rendered only to the employer under the provisions of this chapter. Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services.

(2) Whenever his attendance at a hearing is required, the physician of the injured employee shall be entitled to receive a fee from the employer, or carrier, in an amount

to be fixed by the commissioner in addition to any fee payable as a witness in a civil action.

PAYMENT OF BILLS FOR MEDICAL CARE

Sec. 13-g. Payment of bills for medical care.

(1) Unless within thirty days after a bill has been rendered to the employer by the physician or hospital which has treated an injured employee, such employer shall have notified the commissioner and such physician or hospital in writing that such employer demands an impartial examination of the fairness of the amount claimed by such physician or hospital for his or its services, the right to such an impartial examination shall be deemed to be waived and the amount claimed by such physician or hospital shall be deemed to be the fair value of the services rendered by him or it.

(2) If the parties fail to agree as to the value of medical aid rendered under this chapter such value shall be decided by an arbitration committee consisting of two physicians designated by the president of the medical society of the County in which the claimant resides, and two physicians, also members of the medical society of the State of New York, appointed by the employer or carrier. The majority decision of the arbitration committee shall be conclusive upon the parties as to the value of the services rendered. In the event of equal division, the committee shall select a fifth physician, also a member of the medical society of the State of New York, whose decision shall be conclusive.

(3) The parties to arbitration proceedings under this section shall each pay to the industrial commissioner a sum equal to five per centum of the amount payable under such decision, or a minimum of two dollars, whichever is greater. From sums so collected the commissioner shall pay to each member of the arbitration committee, a per diem fee of ten dollars for each arbitration session attended.

LICENSING COMPENSATION MEDICAL BUREAUS

Sec. 13-c. Licensing of compensation medical bureaus. (1) The commissioner may, upon the recommendation of the medical society of each County or of a board designated by such county society, or of a board as provided in section thirteen-b, authorize and license compensation medical bureaus, maintained by qualified physicians wholly or principally for the diagnosis and treatment of industrial injuries or illnesses in respect of which they are authorized to render medical care under this chapter. Application for such authorization shall be

made on forms to be furnished by the commissioner and shall disclose in full the nature of the personnel and equipment of such bureaus. No such authorization shall be made in the absence of recommendation from the appropriate society or board. Each such bureau which received such authorization shall:

(a) Make reports on its personnel and equipment in such form and at such times as may be required by the commissioner; and

(b) be subject to inspection by the commissioner or the medical society of the County in which such bureau is located; and

(c) pay to the commissioner a license fee of fifty dollars per annum for each office of such bureau.

EMPLOYMENT OF SPECIALISTS

(d) The industrial board, on its own motion, or a referee, upon the recommendation of the chief medical examiner for the workmen's compensation division, hearing a claim for compensation may require examination of any claimant by a physician especially qualified with respect to the diagnosis or treatment of the disability for which compensation is claimed; and may require a report from such physician on the diagnosis, the causal relationship between the alleged injury and subsequent disability, proper treatment, and the extent of the disability of such claimant. The physician to conduct such examination shall be designated by the commissioner from a panel of especially qualified physicians submitted to him by the medical society of the County, or any other board acting for any school of medical practice. Additional names for such panel shall be furnished by the society whenever requested by the commissioner and if such request is not complied with in thirty days the industrial commissioner may add thereto names of his own selection. The employer or his insurance carrier shall pay for such examination in an amount to be directed by the industrial commissioner.

From the above excerpts it is obvious that County societies must either as a body or through a properly created committee be prepared to do the following, and the first must be completed within 60 days after July 1:

1. Prepare list for Commissioner of Labor.
2. Investigate charges: (a) at direction of Commissioner; (b) on its own initiative.
3. Arbitrate differences in fees.
4. Pass upon request for licenses by compensation bureaus.
5. Prepare list of specialists.

There are other important features in the bill in which the County society does not have a responsibility, as, for instance the conduct of laboratories, provisions for hospital treatment, addition of physicians to the Industrial Council, provision for minimum fee schedule, and so on.

Copies of the complete law will be sent out as soon as it is printed.

HARRY ARANOW
B. B. BERKOWITZ
B. WALLACE HAMILTON
JAMES F. ROONEY
LEO F. SIMPSON
Committee on Legislation

Sub-Committee on the Deaf and Hard of Hearing

This sub-committee, acting under the authority of both the Committee on Public Relations and the Committee on Public Health, and with the approval of both these standing committees, desires to make an informative announcement to the members of the Medical Society of the State of New York.

Co-operation of the medical profession is earnestly sought by the sub-committee for two objectives: (1) Raising the standard of otological care of children in schools for the deaf; and (2) working for conservation of hearing of all school children.

All physicians are urged to report to the State Department of Education children discovered to be deaf and in need of special care. These children include the congenital or hereditary types as well as those who

lost usable hearing before speech was established. These cases should be reported to the Bureau of Special Schools.

Children whose hearing is impaired present a different problem. This committee advocates an annual school hearing program for all children for the purpose of early discovery of potential as well as permanently impaired hearing. It is well known that many cases can be cleared up by medical care promptly given and that many others may be arrested or even improved by means of treatment. When neglected these cases suffer a heavy life handicap which limits earning power and induces numerous personality problems. This is not necessary if early discovery be made the rule and if parents are encouraged to refrain from concealing a condition which they feel to be disgraceful.

Pending the extension of the State school hearing program, which is gradually coming into operation, all cases of impaired hearing in children should be reported to the Bureau for Handicapped Children.

The preschool child should not be overlooked. Early education of young deaf children is important. The committee urges that young deaf children be reported and also preschool hard of hearing children whenever discovered.

AUGUSTUS J. HAMBROOK, M.D., Troy,
Chairman

FAIRFAX HALL, M.D., New Rochelle
E. E. SAMUELSON, Secretary, The New York League for the Hard of Hearing, Inc., 480 Lexington Avenue, New York, who is in charge of this exhibit.

Medical Broadcasts

Under the auspices of the Medical Information Bureau of the New York Academy of Medicine, the following radio broadcasts are scheduled from WABC:

Thursday, April 18, 1935, 1:15 P.M., 15 minutes.
Speaker: Dr. Walter C. Klotz, Assistant Professor, Department of Public Health,

Cornell Medical College. Subject: "Modern Methods in Treating Tuberculosis."

Thursday, April 25, 1935, 1:15 P.M., 15 minutes.
Speaker: Dr. Alfred E. Shipley, Deputy Commissioner, Department of Hospitals, New York City. Subject: "Hospitalization of the Tuberculous."

The public mind seems so confused by the medical claims of all sorts of unqualified healers that a western medical journal suggests that the orthodox physician help educate the public by decorating his reception room with portraits of the leaders of medicine like Pasteur, Lister, Osler, and Banting, with brief inscriptions relating their achievements. The magazines on the reading table, too, can be of a kind to impart correct health information, such as *Hygeia*,

and, to bring the moral home, the doctor's framed certificate of affiliation with his State and County medical societies will complete the evidence.

A modern small boy with great attention watching the stethoscope being used on a member of his family: "What station did you get, Doctor?"—*School Physicians' Bulletin*.

Scientific Articles

CONTEMPORARY VIEWS OF ANGINA PECTORIS AND OF CORONARY THROMBOSIS

LEWELLYS F. BARKER, M.D.

BALTIMORE, MARYLAND

Introduction

In a discussion of angina pectoris and of coronary artery thrombosis for the general practitioner it is of note that important advances in the existing knowledge of the coronary circulation and the disorders to which it is liable have been made during the past few years. With the prolongation of the average duration of life that has resulted during the past few decades from the better prevention and control of the maladies of youth, the diseases of the heart that develop in middle and later life now stand perhaps foremost in interest for the general practitioner. And, aside from the valvular diseases of the heart, it is the disturbances of nutrition of the heart that are due to alterations in the flow of blood through that organ that especially challenge medical attention. It is but little wonder then that medical investigators have devoted much time and work to the study of the anatomy, physiology, and pathology of the heart muscle and of the clinical pictures that arise from the nutritional disturbances of the muscle fibers that owe their origin to altered structure and function of the blood vessels and nerves of the heart or to changes in the general circulation and in the body metabolism. Of these clinical pictures, those of arteriosclerosis, of arterial hypertension, of angina pectoris, and of thrombosis of the coronary arteries have been studied so heart are the most important.

Blood-Supply and the Innervation of the Heart Muscle

Important advances have been made in the existing knowledge of the blood-supply of the heart and of the distribution and function of the nerves that go to and

from the heart. The right and left coronary arteries have been studied so intensively that there has been attained a familiarity with all their sub-divisions from their origin at the root of the aorta to their terminations in precapillary and capillary domains. Improvements in the anatomical technic of injection, and especially the introduction of the method of injection with contrast substances like iodipin followed by stereoscopic x-ray examinations, have made it possible for anatomists to visualize the coronary blood-supply throughout its whole extent both in normal and in diseased hearts.

The findings on use of these methods and the observations after experimental ligation of branches of the coronary arteries in animals have given entirely new conceptions of the blood supply of different parts of the heart muscle and of the relations of the ultimate sub-divisions of the right and left coronary arteries to one another. Results of studies in this connection are of greatest clinical interest and will be referred to briefly.

Though, in general, the right coronary artery supplies the right side and the left coronary artery the left side of the heart, that is not an invariable rule. The *right coronary artery* runs to the right and backward in the coronary sulcus and then sends its posterior descending ramus downward in the posterior longitudinal sulcus so as to arrive close to the apex of the heart; through its branches it supplies the right auricle, most of the right ventricle (not all of it), the posterior third of the interventricular septum, and sometimes a large part of the posterior surface of the left ventricle as well as contributing to the supply of the medial (posterior) papillary muscle of the left ventricle.

Read at the meeting of the Academy of Medicine, Rochester, New York, October 4, 1934

The *left coronary artery*, larger than the right, divides almost immediately into two branches: (1) the *anterior descending ramus* that runs downward in the anterior longitudinal sulcus as far as the incisure of the apex and goes over upon the diaphragmatic surface of the heart, and (2) the *circumflex ramus* that runs in the coronary sulcus to the left and then upon the diaphragmatic surface of the heart to the right (though it does not extend as far as the posterior longitudinal sulcus); these rami of the left coronary artery supply blood to most of the left auricle and ventricle, to the anterior two-thirds of the interventricular septum, and to a narrow strip of the anterior surface of the right ventricle along the ventricular septum, as well as participating in the blood supply of the large right papillary muscle in the right ventricle.

With regard to the blood supply of the papillary muscles, it should be kept in mind that in the right ventricle the two medial papillary muscles are supplied by the right coronary artery only, whereas the large lateral (anterior) papillary muscle receives blood from both coronary arteries; in the left ventricle the large anterior (lateral) papillary muscle is supplied by the left coronary artery only, whereas the smaller posterior (medial) papillary muscle receives blood from both coronary arteries.

The blood supply of the important *atrioventricular conduction system* has also been carefully worked out. Here the right coronary artery supplies the Aschoff-Tawara node, and usually also the His bundle as well as the posterior part of the left branch of the bundle, whereas the left coronary artery supplies the right branch of the bundle and the anterior part of the left branch of the bundle. A knowledge of this distribution should in the future be helpful in interpreting the conduction-disturbances that are due to interference with blood supply.

Formerly, it was believed that the branches of the coronary arteries are all so-called "end-arteries" which do not undergo anastomosis in their peripheral distribution, a belief that was at the basis of Cohnheim's interpretations of the origin of infarctions of the heart. But more exact studies during the present century have proven that the coronary

arteries undergo innumerable anastomoses through minute branches within the heart muscle and to a lesser extent through anastomoses on the outer surface of the heart just under the epicardium. There appear to be, however, some differences in the anastomoses in different hearts, a fact that may account for certain variations in behavior of the heart muscle of different persons in coronary occlusion. Despite these proven anastomoses, coronary occlusion (by thrombosis in man or by ligature in experimental animals) causes infarction of the heart since the anastomoses are insufficient to maintain normal nutrition in the domain of distribution of the occluded artery. When parts of the heart muscle have a restricted coronary blood supply some blood may still reach these parts by way of the Thebesian system (Wearn; Grant and Viko).

An interesting anatomical difference between the branches of the left coronary artery and those of the right lies in the fact that the former go off from the main branches almost at a right angle into the wall of the left ventricle, whereas the latter go off obliquely into the wall of the right ventricle. Every single heart muscle cell, as Wearn has shown, has its own capillary blood supply.

As to the relation of blood flow through the coronary circulation to the systoles and diastoles of the heart, there have been two sharply opposed views. One group of investigators assumes that the main flow occurs during systoles and is dependent upon systolic blood pressure; whereas a second group maintains that systoles offer strong resistance to flow within the coronaries and that blood enters them chiefly during diastoles and the flow is accordingly largely dependent upon the diastolic blood pressure in the aorta. Though the matter is still under dispute it would seem to be less important than the determination of the amount of blood that passes through the coronary circulation each minute, and many calculations of this for man (at rest and on exertion) have been made by cardiologists. Newer studies have shown that the blood supply to the heart is regulated according to alterations in various circulatory factors (especially blood pressure and heart rate). In this regulation, the vagus and the sympathetic nerves play an important rôle,

for on vagal stimulation the coronary arteries undergo constriction, whereas on sympathetic stimulation they become widened. Just what part is taken by the intrinsic nerve fibers and ganglion cells of the heart walls in cardiosensory, cardiomotor and vasomotor functions is still rather obscure.

Clinical Picture of Angina Pectoris

Every physician in general practice must frequently see patients who suffer from angina pectoris. The symptoms in a typical severe attack are so characteristic that the condition can usually be recognized immediately. The patient, usually in middle or later life, is suddenly attacked (during exertion or exposure to cold, or during some emotional excitement) by severe pain in the region of the heart or behind the upper or middle part of the sternum. The pain is afterwards described as having been "agonizing," "frightful," or "unbearable," is accompanied by a feeling of intense anxiety and often also by a vise-like sense of constriction in the chest; it often radiates into the left arm and hand, sometimes into other parts of the chest, the neck or the back, or, occasionally, into the right arm. Usually the patient remains almost immobile while the severe pain lasts; he may groan but usually does not talk. The expression of the pale face reveals his anxiety and suffering. His hands may be cold and clammy. There is, as a rule, no shortness of breath, nor does he vomit or show signs of collapse. The pulse rate is, as a rule, not accelerated, though the blood pressure may rise slightly in the attack. After a few minutes, especially if a nitroglycerine tablet be placed under the tongue, or amyl nitrite from a crushed pearl be inhaled so that the face becomes flushed, the pain may cease with experience of a sense of great relief. Often, however, after the administration of the nitrites, some pain in the chest may still continue for a half hour or longer, even if heat be applied to the hands or over the heart.

The practitioner of large experience sees every degree of severity of attacks of angina pectoris from those accompanied by extreme pain and sense of impending death to those that are so mild that their nature may scarcely be suspected.

Statistics recently collected by Eppinger and Levine indicate that angina pectoris affects four times as many men as women, that the average age of onset is in the fifties, that patients often have arterial hypertension, that heredity is important as an etiological factor, and that the average duration of life after the first attack is about four and a half years. Many of course die sooner, but many live very much longer. About half of the patients die suddenly, though not always of coronary thrombosis. In the slower deaths, coronary thrombosis was the cause of death in 30 per cent, whereas less than 10 per cent died of congestive heart failure.

Theories as to the origin of attacks of angina pectoris have been much discussed. That of widest acceptance is the "coronary theory" that assumes sclerosis of the coronary arteries leading to narrowing of their lumina or spasm of the coronary arteries, or a combination of the two, the pain arising directly in the spastic diseased artery or indirectly in the ischemic heart muscle. Opposed to this "coronary theory" is the "aortic theory" that assumes either that the pain is due to distention of a diseased aorta (Allbutt), or to sudden stasis of blood in the root of the aorta and the proximal portions of the main trunks of the coronary arteries (Wenckebach).

Much can be said in favor of each of these theories, though strong objections can also be raised against each of the two views. In 1933 Parade of Stepp's clinic in Breslau in an exhaustive review of the whole subject arrived at the conclusion that in an attack of angina pectoris the condition of the blood supply of the heart is such that any increased demand made upon the heart leads to temporary insufficient nourishment of one or several local areas of the heart muscle. In other words there is a disturbance of the capacity to adapt the local blood flow to the work called for from the heart, and when local areas are insufficiently supplied with blood, the pain of angina pectoris arises—a warning, as it were, to the patient that the demands upon the heart muscle must be lessened! He seems to think that the actual pain arises in the walls of the heart in the small local areas that are not receiving enough blood to meet the local

demands for blood. American clinicians also tend to believe that the origin of the pain in angina pectoris must be attributed to temporary anoxemia of areas of the heart's wall.

Clinical Picture of Coronary Artery Thrombosis

To consider next the sudden occlusion of a branch of a coronary artery by a thrombus (coronary thrombosis with infarction of the heart), there is approached a clinical syndrome that has only relatively recently become easy of recognition even in typical cases. In the ten years preceding 1931, coronary thrombosis was correctly diagnosed in only 43 per cent of the cases that came to autopsy at the Presbyterian Hospital in New York (Levy; Bruenn and Kurtz).

Cary Eggleston reported on coronary thrombosis in the last edition of Cecil's *Textbook of Medicine*, though Dock had recognized the condition during life in one patient and confirmed it at autopsy as early as 1896. A few cases had been reported by Russian and Germany physicians in 1910 and 1911, and J. B. Herrick of Chicago in 1912 had emphasized the fact that coronary thrombosis is a clinical entity that is quite clearly recognizable during life. It was not until about 1918 that general medical interest in the condition became extensively aroused. Since then many important papers have been published and physicians in hospitals and private practice make the diagnosis easily in the typical cases.

European observers (J. Hay, 1933; G. W. Parade, 1933) pay respect to American investigators (J. B. Herrick, F. M. Smith, Libman, Levine, Pardee, Longcope, Wearn, Christian, Oppenheimer and Rothschild, and others) for focussing attention upon coronary thrombosis and for establishing the main clinical and electrocardiographic features. Since their fundamental work many further contributions have been made by Americans and by Europeans. Commendable reports of Americans include Barnes and Whitten, S. A. Levine, M. H. Kahn, W. J. Kerr, E. B. Krumblhaar, Pardee and Master, W. J. Wilson, and Wolferth and Wood. The European papers of A. G. Gibson (1925), J. W. McNee (1925), Parkinson and Bedford

(1928), J. Hay (1933) and G. W. Parade (1933) deserve especial mention.

Clinically, in typical cases, the most characteristic feature is the long-continued severe pain that as a rule appears independent of exertion or emotion (sometimes awaking a patient who is asleep) and is referred to a lower area in the chest than the site of the pain of ordinary angina pectoris, being maximal behind the lower third of the sternum or in the upper abdomen. This pain is usually accompanied by extreme anxiety and a sense of impending death. Instead of remaining immobile as in angina pectoris, the patient is often restless, changing his position frequently or even attempting to walk about. The pain may continue for hours or days despite rest and medication; it is not relieved by nitrites and can only be somewhat assuaged by large doses of morphine.

This persistent severe pain corresponds to the "status anginosus" of the older literature. Nausea, vomiting, and dyspnea are common. The pulse rate is accelerated, the heart sounds are feeble, the blood pressure (owing to the rapid weakening of the left ventricle) usually falls considerably within a few hours (though a brief initial rise may be observed), and the pulse becomes feeble, often scarcely perceptible. Collapse symptoms are present from the start (cold-sweat, ashy-gray color and cyanotic lips, and later profound weakness). Slight fever develops, as a rule, accompanied by a polymorphonuclear leukocytosis (sometimes 15,000 W.B.C. or more). Occasionally, a pericardial friction rub develops; signs of pulmonary edema are often discernible. When such a syndrome has appeared, one can be practically certain that coronary occlusion (thrombosis) has occurred, even without aid of a corroborative electrocardiogram.

The severity of the symptoms varies with the site and extent of the area of heart muscle that is deprived of its blood supply. When the area is relatively small, the symptoms may be so mild as to make impossible a positive diagnosis without the aid of an electrocardiogram, but it should be emphasized that clinicians feel that by far the majority of cases, mild and severe, can be diagnosed with practical certainty in the absence of an electrocardiographic tracing.

Even in the milder cases, the site and distribution of ache or pain that arises spontaneously (without relation to effort or emotion) and persists for a longer time despite repose, mental calm and the administration of nitrites or morphine, permit the making of the diagnosis of coronary thrombosis. If not certain, but suspicious, of thrombosis, the physician, keeping the patient at absolute rest in bed, will watch for the development of slight fever with leukocytosis or for the appearance of a transient friction rub. If the diagnosis continues to be in doubt, an electrocardiogram will usually be decisive; this can easily be made in hospitals, or a portable machine may be taken to the patient's home to make a tracing.

The cases of coronary thrombosis most likely to lead to an erroneous diagnosis are: (1) Those in which the pain is abdominal (simulating an acute surgical condition in stomach, intestine, gall-bladder, appendix, or urinary tract, which may be accompanied by fever and leukocytosis); or (2) those in which the dominant symptoms are dyspneic or syncopal and are not accompanied by pain. In such cases, a sudden and unexplained fall in blood pressure, or a history of earlier mild anginal pains may arouse suspicion, especially if the patient be of middle age or older, and any signs of arteriosclerosis can be made out. In such bizarre syndromes, a positive diagnosis may not be possible without the aid of an electrocardiogram. More than once, in the absence of adequate study, surgical exploration of the abdomen has been resorted to with the mortification of negative findings!

In about 85 per cent of the cases (according to Parade), it is the anterior descending ramus of the left coronary artery that is thrombosed so that it is the syndrome due to this lesion that the general practitioner is very likely to encounter. (Barnes and Ball [1932] in their series of 1,000 cases found a lesser incidence for infarction of the anterior descending ramus of the left coronary artery.)

When the lesion is in the right coronary artery, it is usually situated in the horizontal branch that supplies a large part of the posterior wall of the left ventricle so that the infarction is located

there (Whitten). In the rare instances in which the whole of the right coronary artery is thrombosed, acute insufficiency of the right side of the heart develops with stasis phenomena (pulmonary edema, enlargement and tenderness of the liver, and engorgement of the peripheral veins). Moreover, since the atrioventricular conduction system receives its blood supply from the right coronary artery chiefly, marked disturbances of stimulus formation or of stimulus conduction (other than bundle branch block) developing after an attack points to involvement of the coronary artery of the right side rather than to that of the left.

Ordinarily infarction of the anterior wall of the left ventricle with involvement of the apex and the anterior part of the interventricular septum is of graver prognosis than infarction of the posterior wall of the left ventricle (F. C. Wood).

Electrocardiograms in Angina Pectoris and in Coronary Thrombosis

Since electrocardiography has been applied, especially here in America, to the study of patients suffering from angina pectoris or from coronary thrombosis, acquaintance with the different E K findings in the two syndromes has been gained. Whereas in ordinary uncomplicated angina pectoris there may be slight alterations of the curve (most often a lowering of the level of the tracing of the R-T interval in leads I and II), in the infarction of the myocardium that follows coronary thrombosis in human beings (or ligation of the coronary artery in experimental animals), there is usually a change in the tracing in from twelve to twenty-four hours after the attack that is almost pathognomonic. Thus when the anterior descending ramus of the left coronary artery has been occluded and has caused acute infarction, the level of the tracing of the R-T interval is usually markedly raised in leads I and II with a rounded convexity upward, arising from the descending limb of the R-wave above the iso-electric line ("T-en dôme"); in later days, the T-wave (after two or three weeks) often becomes inverted (not always) while the R-T line may still bulge somewhat upward ("coronary T"), though it tends to approach the iso-electric level.

In some cases, the tracing may return to normal in the course of a few weeks. (For descriptions of the electrocardiograms in thromboses of other coronary branches, the special literature may be consulted.)

Too much stress should not be laid, however, solely upon inversion of the T-wave in lead III, since it is said that it may be observed sometimes in normal hearts or in hearts in which there is a relative preponderance of the right ventricle.

During the past decade attention has been paid to certain alterations in the E K that may persist for months or years after an infarction has occurred. Thus considerable importance has been attributed to the continuance of a large Q-deflection in lead III (Pardee, 1920; Wilson, 1926; France, 1934), especially when it persists in association with left axis deviation.

Emphasis has also been laid upon evidence of low voltage in all leads in old cases of coronary thrombosis by Wearn (1923), by Parkinson and Bedford (1928), and by Levine and Brown (1929). Notching, slurring, and widening of the Q-R-S complex in more than one lead has also persisted in some cases. But any of the changes just mentioned, though commonest after infarction, may also occur in cases of diffuse myocardial fibrosis without history of preceding infarction (J. Hay, 1933).

For a time it was believed that infarction may occur in certain areas of the heart muscle (especially in a girdle domain midway between the base and apex of the heart) and yet no change in the E K become demonstrable. This appears to be true for the ordinary limb leads I, II, and III. But if chest leads be used in addition to limb leads, these areas are no longer "silent" in infarction, but yield peculiar E K tracings that have been described by Wolferth and Wood (1932), and also by Katz and Kissin (1933).

In rare instances, an E K like that of acute coronary thrombosis (high take-off of S-T interval from the descending limb of the R-wave) may be met with in brief attacks of angina pectoris (Brow and Holman, 1933; Hausner and Scherf, 1933).

Treatment of Patients with Angina Pectoris and with Coronary Thrombosis

Attacks of angina pectoris (without coronary occlusion) are often promptly relieved as every practitioner knows by the use of vasodilators, say by placing a 1/100 grain tablet of nitroglycerin (of hypodermic type) under the tongue for solution, or by inhalation of the fumes of amyl nitrite (crushed pearl or ampoule), repeating the dosage if necessary until the pain disappears. Many patients who suffer from angina pectoris always carry these tablets or pearls with them so as to have them for immediate use if attacked. If a physician be present during a severe attack he may give 1/4 or 1/2 grain of morphine hypodermically. The patient nearly always immobilizes himself and certainly he should avoid all movements until the paroxysm ceases. Though theoretically epinephrin (as a coronary dilator) might be expected to stop an attack of angina pectoris, the opposite seems to be the case (Levine), perhaps because of a paradoxical reaction of the coronaries in angina pectoris.

To do as much as possible to prevent the recurrence of attacks, a thorough diagnostic study should be made of the patient and the treatment should be individualized in accord with the findings. In all cases, the precipitating causes of the attacks (excessive physical exertion; emotional excitement; sudden exposure to cold) should be sedulously avoided. The use of tobacco should be given up and the diet should be bland with avoidance of any overloading of the stomach. Gout, obesity, diabetes, or syphilis if existent should receive appropriate treatment. Cardiokinetic muscle extracts have been given, but their value remains to be determined by further observations. The periodic use of courses of purin derivatives (theobromine sodium salicylate or dimethylxanthine) or of a combination of theobromine and phenobarbital seems to be helpful to some patients. Surgical measures have been employed, including recently total thyroidectomy, but one would hesitate to recommend them as long as the condition can be made tolerable by medical measures and better management of activities.

In an attack of coronary thrombosis, the strictest physical and mental rest should be enjoined, the patient being kept continuously in bed and the use of bedpan and urinal ordered. He should have special nurses if possible who will feed him at first and will turn him over when required. For the atrocious pains, large doses of morphine—enough to control them—should be given hypodermically during the first two or three days; a quarter of a grain at a dose may be wholly insufficient and the amount necessary to give relief should unhesitatingly be injected. Later on, milder sedatives (codein, and so on) may suffice, but the physician should see to it that the patient is kept as free as possible from anxiety and restlessness and that he secures enough sleep. Heat should be applied until the period of shock has been passed. Liquid diet alone should be permitted at first; later on five feedings daily of semi-solid food and of milk may be given. A daily enema may be required to keep the intestine clear.

Though one will say only enough to the patient concerning diagnosis and prognosis to secure his co-operation in the rigid treatment, the patient's family should be told of the gravity of the condition and of the high mortality rate, even under the best of care. Even when the patient survives the first few days, the dangers are by no means passed, and bed-rest should be enjoined for 6 or 8 weeks in order: (1) To give the lesion in the myocardium the best opportunity to heal, and (2) to prevent exertions that would favor rupture of the heart or the development of a cardiac aneurysm. No digitalis should be used at first, though later in the course if signs of congestive failure develop it may be used with caution. The general practitioner who finds himself in charge of a patient with coronary thrombosis will usually do well to ask permission of the family for the aid that consultation with a specialist on diseases of the heart may give.

1035 NORTH CALVERT STREET

References

1. Barnes, A. R.: Some Recent Contributions to Knowledge of Coronary Disease, *J. Indiana M. A.* 26: 323, 1933.
2. Barnes, A. R., and Whitten, M. B.: Study of the R-T Interval in Myocardial Infarction, *Am. Heart J.* 5: 142, 1929.
3. Blumgart, H. L., Levine, S. A., and Berlin, D. D.: Congestive Heart Failure and Angina Pectoris; Therapeutic Effect of Thyroidectomy on Patients without Clinical or Pathologic Evidence of Thyroid Toxicity, *Arch. Int. Med.* 51: 866, 1933.
4. Bohning, A., and Katz, L. N.: Unusual Changes in the Electrocardiograms of Patients with Recent Coronary Occlusion. *Am. J. M. Sc.* 186: 39, 1933.
5. Brow, G. R., and Holman, D. V.: Electrocardiographic Study During a Paroxysm of Angina Pectoris, *Am. Heart J.* 9: 259, 1934.
6. Christian, H. A.: Cardiac Infarction (Coronary Thrombosis); an Easily Diagnosable Condition, *Am. Heart J.* 1: 129, 1925-26.
7. Enklewitz, M.: Diabetes and Coronary Thrombosis; an Analysis of Cases Which Came to Necropsy, *Am. Heart J.* 9: 386, 1934.
8. Eppinger, E. C., and Levine, S. A.: Angina Pectoris; Some Clinical Considerations with Special Reference to Prognosis, *Arch. Int. Med.* 53: 120, 1934.
9. France, R.: The Large Q Wave in Lead III of the Electrocardiogram, *Am. J. M. Sc.* 187: 16, 1934.
10. Hausner, E., and Scherf, D.: Ueber Angina Pectoris-Probleme, *Ztschr. f. klin. Med.* 126: 166, 1933.
11. Hay, J.: Certain Aspects of Coronary Thrombosis, *Lancet Lond.* 2: 787, 1933.
12. Herrick, J. B.: Clinical Features of Sudden Obstruction of the Coronary Arteries, *J. A. M. A.* 27: 100, 1912; Thrombosis of the Coronary Arteries, *J. A. M. A.* 72: 387, 1919; Some Unsolved Problems Connected with Acute Obstruction of Coronary Artery, *Am. Heart J.* 4: 633, 1929; Atypical Features of Acute Coronary Occlusion, *Ann. Int. Med.* 3: 105, 1929.
13. Kahn, M. H.: The Electrocardiographic Signs of Coronary Thrombosis and Aneurysm of the Left Ventricle of the Heart, *Boston M. & S. J.* 187: 788, 1922.
14. Katz, L. N., and Kissin, M.: Study of Lead IV; Its Appearance Normally, in Myocardial Disease, and in Recent Coronary Occlusion, *Am. Heart J.* 8: 595, 1933.
15. Kerr, W. J., Larkey, S. V., and Larsen, A. E.: Coronary Occlusion and Myocardial Degenerations; Some Clinical and Pathological Considerations, *Calif. & West. Med.* 23: 46, 1925.
16. Krumbhaar, E. B.: Heart Rupture During Sleep Following Coronary Thrombosis, *Proc. Path. Soc., Phila.*, 26: 109, 1923.
17. Levine, S. A.: Coronary Thrombosis; Its Various Clinical Features. 8°, Baltimore, 1929 (Vol. 16 of *Medicine Monographs*, Baltimore).
18. Levy, R. L., Bruenn, H. G., and Kurtz, D.: Facts on Disease of the Coronary Arteries, Based on a Survey of the Clinical and Pathologic Records of 762 Cases, *Am. J. M. Sc.* 187: 376, 1934.

19. Libman, E.: Some Observations on Thrombosis of the Coronary Arteries, *Tr. Ass. Am. Physicians* 34: 138, 1919.
20. McNee, J. W.: The Clinical Syndrome of Thrombosis of the Coronary Arteries, *Quart. J. Med.* 19: 44-52, 1925-26.
21. Oppenheimer, B. S., and Rothschild, M. A.: Abnormalities in the Q R S Group of the Electrocardiogram Associated with Myocardial Involvement, *Proc. Soc. Exp. Biol. & Med.* 14: 57, 1916.
22. Parade, G. W.: Die arterielle Blutversorgung des Herzens und ihre Störungen, *Ergeb. d. inn. Med.* 45: 337, 1933.
23. Pardee, H. E. B., and Master, A. M.: Electrocardiograms and Heart Muscle Disease, *J. A. M. A.* 80: 98, 1923; also, Significance of Electrocardiogram with Large Q in Lead III, *Arch. Int. Med.* 46: 470, 1930.
24. Parkinson, J., and Bedford, D. E.: Successive Changes in Electrocardiogram after Cardiac Infarction (Coronary Thrombosis), *Heart* 14: 195, 1928.
25. Riesman, D., and Harris, S. E.: Disease of the Coronary Arteries with a Consideration of the Data on the Increasing Mortality of Heart Disease, *Am. J. M. Sc.* 187: 3, 1934.
26. Slater, S. R., and Kornblum, D.: Bilateral Coronary Occlusion with Mitral Stenosis, *J. A. M. A.* 102: 38, 1934.
27. Smith, F. M.: Ligation of Coronary Arteries with Electrocardiographic Study, *Arch. Int. Med.* 22: 8, 1918; *ibid.* 25: 673, 1926.
28. Wearn, J. T.: Thrombosis of the Coronary Artery, with Infarction of the Heart, *Am. J. M. Sc., Phila.*, 165: 250, 1923.
29. Whitten, M. B.: Relation of Distribution and Structure of Coronary Arteries to Myocardial Infarction, *Arch. Int. Med.* 45: 383, 1930.
30. Wilson, W. J.: Cardiac Clinic, with Electrocardiographic Demonstrations, *Ann Clin. Med.* 5: 238, 1926.
31. Wolferth, C. C., and Wood, F. C.: Electrocardiographic Diagnosis of Coronary Occlusion by Use of Chest Leads, *Am. J. M. Sc.* 183: 30, 1932.
32. Wood, F. C.: Electrocardiographic Diagnosis of Coronary Occlusion, *Pennsylvania M. J.* 37: 309, 1934.
33. Wood, F. C., Bellet, S., McMillan, T. M., and Wolferth, C. C.: Electrocardiographic Study of Coronary Occlusion; Further Observations on the Use of Chest Leads, *Arch. Int. Med.* 52: 752, 1933.
34. Wood, F. C., and Wolferth, C. C.: Angina Pectoris; Clinical and Electrocardiographic Phenomena of Attack and Their Comparison with Effects of Experimental Temporary Coronary Occlusion, *Arch. Int. Med.* 47: 339, 1931.

THYROID NOT A "BRAIN OIL"

The New York Academy of Medicine has issued a warning against indiscriminate use of thyroid extract as a tonic for tired business men. The warning, issued through the academy's Bureau of Medical Information, was inspired by a United Press dispatch from Kansas City, in which Dr. George W. Crile of Cleveland was quoted as saying, "When a deficient amount of this glandular product is secreted, and this is common in the second half of a business man's life, his brain begins to slow up and his associates notice a letting down in his work. . . . Then the man can take thyroid extract and his brain will be sharpened. . . . Thus the lagging individual can be placed back in the saddle again."

The Academy's statement, pointing out that the very symptoms mentioned might come from excessive thyroid secretion, so that they would only be aggravated by taking the pills, and warning against toying with this glandular high explosive, said:

"The crux of Dr. Crile's observations on the thyroid gland, assuming that he is quoted correctly and completely, lies in the condition which he stipulates, namely, 'when a deficient amount of this gland product is secreted.' It has long been known that the condition of inadequate secretion of thyroid called hypothyroidism or myxedema, causes

a definite slowing up of all body functions, including that of the brain. For this condition, thyroid in one form or another has been effectively prescribed.

"On the other hand, it is important that the public should be warned that thyroid is no 'brain oil' which, quantity for quantity, can increase the smooth workings of the human intellect. On the contrary, to use the same rather crude analogy, too much oil may gum up the machine.

"Fatigue, irritability and lack of the power of concentration are as liable to be the symptoms of an excessive thyroid secretion as of deficiency. The indiscriminate taking of thyroid by those who do not require it is fraught with great danger. We witness the damage that an excess of thyroid can cause in the condition clinically known as hyperthyroidism. Particularly liable to damage is the heart musculature. Medical science must regretfully warn the public that the elixir of life is not to be found in the thyroid gland."

A physician in Portland, Oregon, Dr. Junius B. Wright, celebrated his hundredth birthday in January, and when the reporters asked for something to print, he said: "Come around a year from now, and I will give you some kind of story."

PERITONITIS

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"If a man knows peritonitis he knows abdominal surgery."¹

Peritonitis is, with few exceptions, a complication of some other intra-abdominal disease. It is a secondary and usually a terminal event: only with the greatest rarity is it designated as a primary peritonitis. That form of peritonitis which is due to an infection with the pneumococci is fortunately rare and because we are unable to determine the portal of entry it is sometimes, although erroneously, called a primary peritonitis. In ordinary practice peritonitis means an infective process, involving some portion of the abdominal cavity and characterized by a progressive extension and sequential involvement of various portions of the abdominal viscera.

We classify peritonitis into acute septic peritonitis and acute suppurative peritonitis according to the character of the exudate. Furthermore we speak of an acute local peritonitis and acute diffuse peritonitis according to the amount of peritoneal involvement. General peritonitis is a misnomer as the entire peritoneal cavity is seldom completely involved. Diffuse septic peritonitis is due to the streptococcus which produces little or no exudate, gives a blistered appearance to the peritoneum and produces large quantities of toxin. It has a remarkable tendency to penetrate the subserous lymph spaces with the development of sub-peritoneal cellulitis and general septicemia. The peritoneum is lusterless, thickened, edematous, markedly hyperemic or even with petechia. This type of infection occurs most frequently in women and usually arises from an uterine infection.

In the suppurative peritonitis, the condition is characterized by exudation, the formation of adhesions; the peritoneum is rough, hyperemic, thickened and plastered over with fibrinoplastic material. The bacteria most often encountered in this condition are in the order of frequency colon, streptococcus (most frequently found in women), pneumococcus

(most frequently found in women and children). By far the most frequent of the bacteria involved in the production of peritonitis is the colon group. The frequency of colon infections is of statistical importance and may not represent the true condition for the bacillus coli communis is capable of growing so rapidly that it may become predominant while the initial infection may have been caused by some other micro-organism.

The pneumococcus infection is most frequently found in children and women, and is usually associated with an upper abdominal infectious atrium, the bacteria probably coming from swallowed sputum. The pneumococcus produces a yellow-green, odorless gummy pus with flakes or masses of fibrin and a tendency to form delimiting adhesions. It is not improbable that a primary focus in the lung or ear or in the Fallopian tubes will be found on diligent search. Bacillus pyocyaneus is an uncommon cause of peritonitis but is capable of producing a very virulent peritonitis. This bacterium is a normal inhabitant of the intestine and produces green pus only in the presence of oxygen which is essential for the production of the pigment pyocin. The infection that it produces is usually a local peritonitis and this particular bacterium is never found with the colon bacillus.

The staphylococci occupy an under-terminate position in the production of peritonitis. Staphylococcus, according to Dodgeon and Sargent,¹⁵ is practically non-pathogenic; it is found on the extreme edge of peritonitic inflammation and it has been assumed that it produces a mild anticipatory inflammation of the peritoneum which is thereby a protective mechanism for creating delimiting adhesions. The staphylococcus is usually found in the early or beginning stage of chemical irritation of the peritoneum such as occurs in ruptured ectopic gestation and ovarian cyst. It produces a milk-like

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pus, non-odorous, which is usually sterile, and is essentially a reactive or protective fluid. It is this fluid that one meets when the abdomen is opened in a subacute appendicitis.

The diagnosis of peritonitis is ordinarily not difficult. A consideration of the possible primary sources of infection will in most cases lead one to a correct diagnostic interpretation; 95 per cent of all cases follow in order of frequency disease of the appendix, pelvic organs, gallbladder, and gastroduodenal zone. A history of pelvic infection, menstrual irregularity or trauma may be elicited or a history of gastric distress and the ulcer syndrome may be brought out upon inquiry. The age of the patient, the sex, the irregular dyspepsia and colic might be sufficient to confirm a diagnosis of pre-existing gallbladder disease, while the rapid and definite sequence of symptoms in acute appendicitis is characteristic and decisive.

In the early stage of a peritonitis abdominal pain is invariably present, is constant in character, and tends to be localized. It is associated with tenderness and abdominal distention. Definite abdominal rigidity is present over the area of intra-abdominal inflammation and muscle spasm is also elicited. Fever is usually present. There is a persistent, rapidly-rising pulse, with vomiting usually frequent and without effort, together with an inability to pass flatus or stool. Leukocytosis and polynucleosis ordinarily accompany the process, exceptions being found, however, in the acute fulminating streptococcic peritonitis. Early in the condition the facies is alert, and apprehensive long before the typical Hippocratic countenance becomes evident.

The total surface area of the peritoneum is about equal to the skin area, between 17,000 and 18,000 square inches.² It has been proved that absorption of fluids from the peritoneal cavity is accelerated by the Trendelenburg posture³ and minimized by the so-called Fowler posture, the rate of absorption being 15 per cent less when the head and body are elevated.

This would account for the clinical benefits observed in the Fowler, Coffey, Kuster positions. The rate of absorption varies with the different portions of the

peritoneal cavity. The most rapid absorption takes place from the diaphragm, next the omentum, thirdly the visceral peritoneum, fourthly the parietal peritoneum, and least from the pelvis. Dandy and Rowntree³ by means of phenolsulphophthalein injections into the peritoneum have demonstrated that absorption is by way of the blood vessels and irrespective of position, although the rate of absorption is facilitated by posture. Experimental and clinical data indicate that absorption is hemic, not lymphatic; that the peritoneum is capable of absorbing from 3 to 8 per cent of the body weight in one hour;² that the rate of absorption is dependent upon position; that the localization of fluid within the peritoneal cavity modifies the rate of absorption; that the character of the fluid influences the rate of absorption; that bodily respiratory and peristaltic activity influence absorption; that all absorption depends upon the living integrity of the endothelium. Solid particles are engulfed by a variety of peritoneal cells, macrophages, microphages, and the neutro-leukocytes. The great majority of foreign particles are probably encapsulated by fibrinoplastic lymph.

The absorption of soluble toxins corresponds to the absorption of fluids. Buxton and Torrey⁴ found that if a large dose of typhoid bacilli were injected into the peritoneal cavity of a rabbit the bacteria were immediately destroyed by bacteriolytic substances of the blood serum. The rapid bacteriolysis liberated a large amount of endo-toxin and an overwhelming dose of toxin was absorbed, with death. This observation is paralleled in humans by the deaths that immediately follow extensive operative procedures in the presence of an active peritoneal infection where the manipulations and trauma incident to the operation bring about an initial lethal dose of toxin. The mortality is ascribed to shock, whereas the particular cause of death is the sudden overwhelming dose of toxin.

With the patient in a recumbent position the colon forms three well defined fossae or paracolic pools: (1) the fossa formed between the transverse colon, the anterior abdominal wall and the under surface of the liver and portion of the diaphragm; (2) the lateral fossa or renal,

formed to the outer side of the cecum and ascending colon on the right side; and (3) the lateral fossa to the outer side of the descending colon and sigmoid on the left side. For the free drainage of fluid, however, from either lateral fossa into the pelvis requires an angulation of the patient from the horizontal to approximately 35 to 45 degrees. In turn, the transverse paracolic fossa is divisible into a right and left compartment by the round and falciform ligaments of the liver.

It is axiomatic that every case of peritonitis begins as a local lesion and that from this local point of infectivity there is a gradual or rapid spread of the infection to remote zones or areas of the abdominal cavity. The gastro-intestinal canal lies within the abdominal cavity in a state of hydrostatic balance and freedom of movement of the intestines is attained by the film of lymph that is at all times present on any peritoneal surface. Since most cases of peritonitis are secondary to acute perforating appendicitis and then in the order of frequency secondary to pelvic affections, gallbladder infections, and perforations of the gastro-duodenal zone, it is well to consider the mechanism of the typical case of peritonitis.

The picture as it occurs from acute perforation of the gastro-duodenal zone is not typical of the ordinary type of peritonitis. The pouring forth of gastric or duodenal contents from a perforation brings about an abdominal response characterized by abdominal rigidity that is equalled by no other intra-abdominal condition.⁶ The acute onset, board-like rigidity, complete immobilization of the patient, the early initiatory symptoms of shock, is a picture portraying all the evidence of a serious condition. The approach to the serosa of an infective agent is characterized by a throwing out by the adjacent endothelial cells first of a transudate and later an exudate. This yellowish fibrinoplastic fluid is the response by the peritoneum to a bacterial or chemical irritation. The coils of small intestine or large intestine in the immediate vicinity of the infection become first hyperactive and later parietic with the formation of adhesions. This mechanism is essentially protective in that it seeks to wall off or to throw up barricades against the spread of infection. It is in this stage that most

of the cases of peritonitis are seen by the attending surgeon.

From these initiatory pathological changes there begins a progression of events that are represented in the following sequence: (a) an increase in the severity of the pathological reaction; (b) further attempts to arrest the spread of the infectious process by walling off; (c) a breaking through of the barriers of the local peritonitis and the development of a progressive spreading, diffuse peritonitis. Infection is spread within the abdominal cavity largely by movements of the small intestines, the alternate rising and falling of the diaphragm creating a pump-like or siphonage current.

Death occurs in peritonitis from (a) toxemia—the result of peritoneal absorption; (b) intestinal obstruction, either in the form of adynamic ileus, or a dynamic ileus (Handley Sampson⁶ is of the opinion that absorption of the entero-genic toxins above the obstruction are really the death-producing factor); (c) septicemia, and (d) the complications—pulmonary, cardiac, exhaustion, and pyemia.

The clinical consideration of peritonitis embraces three phases: (1) diagnosis and preoperative treatment; (2) the operative treatment, and (3) the post-operative treatment. The severity of the condition is directly proportional to the amount of absorption from the peritoneum and the treatment resolves itself into measures directed toward modifying the degree of absorption and to correct intestinal obstruction when and if it intervenes. The outstanding surgical or medical considerations are: to keep the peritonitis local; to prevent its becoming spreading or general in type; to bring a spreading peritonitis into a condition of local peritonitis.

Surgical intervention in peritonitis has gone through many phases in its evolution, from the earlier days of doing nothing to a second phase when the therapy consisted of a laparotomy with aspiration and lavage of the entire intra-abdominal cavity. A third phase considered the physiology of peristaltic rest and peritoneal absorption and consisted of rest and starvation,⁷ plus adequate and timely surgical intervention.

By far the most active agent in changing a local peritonitis into one of the spreading character is the use of

cathartics or laxatives in the presence of abdominal pain. If one should select any rule for guidance in the case of suspected peritonitis it would be "obtain and promote peristaltic rest." By peristaltic rest is meant the more or less complete cessation of peristaltic movement of the intestine. By far the simplest way to obtain peristaltic rest is to prevent absolutely the taking of anything by mouth. This applies with particular force against the taking of any food, even water, and the absolute withholding of any laxative or any cathartic.

The effect of food, or even water, taken into the stomach is to stimulate intestinal peristalsis and a segment of small intestine that may be quietly wrapped around a diseased area in the neighborhood of a perforated appendix is by the very movement of peristalsis spread and moved to some other non-infected area of the abdomen. The result is the spreading of an infection over the omentum, along the mesentery and from coil to coil of intestine. If this mechanism obtains upon the taking of only food products and water, how much more magnified is the peristaltic movement induced by salts, laxatives, or castor oil.

It has been found that an icebag applied to the abdomen tends to inhibit peristalsis whereas the hotwater bottle tends to stimulate peristalsis. Furthermore, the application of an icebag to the abdomen brings subjective relief but tends to prevent the local hyperleukocytosis essential for protection. Fauntleroy¹⁸ has demonstrated that cases of acute appendicitis treated with icebags show a general leukocytic count of about 4,000 per cubic millimeter less than those cases that were not treated. It has been found that a quarter of a grain of morphine is an effective antiperistaltic, producing almost complete cessation of intestinal movement anywhere from four to six hours.

After a certain number of coils of intestine have become inflamed or infected there develops what is the single, most outstanding death-producing factor in peritonitis—the development of intestinal obstruction. There is ordinarily a varying degree of abdominal distention but in the protective mechanism resorted to by the peritoneum to prevent the extension of the inflammatory process coils of

intestine become acutely angulated, bound down to one another and mechanical obstruction ensues.

It was early discovered that the rate of absorption varied with different localities within the abdomen and it has been an observation since time began that pelvic infections other than the parametrial infections of the puerperium were ordinarily not lethal. With some degree of assurance it was assumed that the higher the infection within the abdomen the more rapid the peritonitis and the greater the mortality. Hence, it was assumed that the rate of absorption from a peritoneal cavity could be influenced by the posture.

At the turn of the century Clark⁸ suggested that the foot of the bed be elevated so that absorption could be accelerated and the patient thus enabled to throw off the toxemia more quickly. Experience demonstrated that the absorption from a peritoneum in the Trendelenburg position was much more lethal than when the absorption was diminished.

It remained for Russell Fowler in 1906⁹ to advise the reverse position that now bears his name, the so-called Fowler position. It was assumed by elevating the patient so that the head was at least from 35 to 45 degrees elevated from the horizontal that absorption would be less rapid and therefore the patients would ward off or protect themselves from a too rapid or lethal inundation of the circulation with the toxins. Experience demonstrated that this was a protective measure and the Fowler position for peritoneal infections is now almost universally applied in the treatment of peritonitis.

The next step in chronological sequence in the treatment of peritonitis was contributed by a number of observers but given official status by Ochsner⁷ who suggested that in a case suspected of having peritonitis there should be absolutely nothing given by mouth, and that the patient should be maintained in the Fowler position, and the so-called rest and starvation treatment instituted. The acceptance of this rational form of therapy produced results yet the mortality remained excessively high by reason of the inability of the rest and starvation method to prevent the development of the more seriously complicating factor, viz., the mechanical obstruction of the bowels.

Murphy "revolutionized the whole treatment of peritonitis."¹⁰ In a paper read before the British Medical Association at Toronto in 1906, and which today is still a classic of surgical pathology and surgical thinking he added two noteworthy additions to the treatment of peritonitis. The first—institute surgical drainage—"get in quick and get out quicker," and secondly, the maintenance of water balance by proctoclysis.

The ancient Hippocratic dictum, *ubi pus ibi evacuo*, was one of the salient points of the Murphy idea. The presence of pus is lethal when the products of an infection are retained under pressure and the precise and quick and accurate method of relieving pus pressure is by the institution of surgical drainage. It is by no means necessary that the pathological organ should be removed, or that the entire pathological zone should be subjected to surgical exposure. Surgical intervention in peritonitis rests upon the simple procedure of instituting drainage to the site of the infection and to the relief of intestinal obstruction. No lavage or "wiping away" of lymph or undue handling of intestines should be attempted. If the patient is to receive nothing by mouth, it becomes necessary to maintain an adequate degree of water in the tissues and in the circulation.

It is quite obvious that with the lack of water by mouth and the increased loss of water by fever and vomiting there results increased concentration of the toxins in the blood. This in turn will destroy the eliminative function of the kidneys.

Murphy suggested that the rectum and colon could be utilized for the absorption of fluid and he recommended the giving by rectum after the drop method of huge quantities of normal saline, up to five or even more quarts of water per day.

It was found that the rectum not only tolerated the introduction of fluids but that the absorption was so rapid that it became possible to so load the vascular system with water as to produce an hydremia. The first beneficial effect would be to dilute the toxins already present in the circulation. In the second place a further therapeutic effect was obtained in that it was possible to reverse the peritoneal current and to actually

cause the peritoneum to be a secreting membrane instead of an absorbing membrane.

The clinical fact that peritoneal cases with intra-abdominal drainage can take more fluid by rectum than cases without drainage would seem to lend confirmation to this. It was readily apparent that the taking of so much salt was, per se, dangerous, and it was observed that edema over the shins occasionally occurred and infrequently an edema of the lungs with hydrothorax resulted from a too great an intake of salt. Accordingly, the normal saline for proctoclysis was replaced by ordinary tap water, especially after Trout¹¹ had demonstrated that plain water was more readily absorbed, was better tolerated in the rectum and the patient required less water to satisfy thirst after proctoclysis was discontinued than when saline was employed.

The experimental study of Christian on artificial nephritis and the danger of salt retention in nephritis, together with edema of the ankles, face and lungs with proctoclysis with saline solution demonstrated that the amount of salt by proctoclysis is a factor of danger.

Further additions to the treatment of peritonitis came from the field of chemistry and were evolved from a study of the physiological functions of the liver. It may be said in all seriousness that the protection of an individual from abdominal infection and abdominal surgery is dependent upon the liver being adequate to function in a normal capacity in the presence of abnormal absorption. The great rôle of sugar—dextrose—in protecting body proteins, in allowing for the more adequate and more ample function of liver, became apparent; hence various strengths of dextrose solutions were added to the fluid to be given by rectum.

Human life may be said to depend upon an adequate and precise adjustment of the water-salt balance. Rowntree¹² states that the total of all secretions poured into the intestinal tract varies from 7,500 to 10,000 c.c., an amount of fluid more than twice the total blood volume. Orr¹³ has succinctly demonstrated the outstanding importance of dehydration, hypochloremia and acid-base balance in preoperative and postoperative treatment, and indicates that while an animal may lose 40 per cent of

its body weight in glycogen, fat, and protein without death, a water loss of 10 per cent is associated with serious complication, while a loss of 20 to 22 per cent of water invariably brings about death.

Peritonitis with its repeated and effortless vomiting brings about a marked loss in blood chlorides—hypochloremia. The indication is to provide a proper amount of chlorides, by the introduction of 200 to 500 c.c. of a 2 to 4 per cent solution of sodium chloride intravenously, or if a more rapidly acting salt therapy seems necessary 20 c.c. of 10 per cent solution of sodium chloride intravenously.¹⁴ If vomiting occurs, either before or after operation, complete and absolute deflation of the stomach is accomplished by introducing an indwelling nasal Levine tube.

We may therefore summarize the treatment of peritonitis (see Table) as follows: (1) an accurate anatomical diagnosis of the site and origin of the infection; (2) adequate measures to restrict the infection to a local manifestation and to prevent the extension to a general peritonitis; (3) early surgical intervention; (4) absolutely nothing by mouth; (5) the Fowler position, either by angulation of the patient or by angulation of the bed; (6) the maintenance of adequate water balance—minimal of 3,000 c.c. daily over and above the amount lost by vomiting or Levine tube drainage—(a) by proctoclysis, (b) by hypodermoclysis, (c) by phleboclysis; (7) an adequate maintenance of dextrose intake—(a) by rectum: solutions containing 4 to 10 per cent dextrose, (b) by intravenous method: from 4 to 10 per cent solutions of normal saline when volumes of 800 to 1,000 c.c.

are given; from 20 to 40 c.c. of 50 per cent dextrose solutions when only dextrose is given; (8) the use of the Levine tube intranasally for complete emptying of the stomach; (9) in the presence of vomiting and to counteract hypochloremia and alkalosis, the giving intravenously of hypertonic saline solutions, 2 to 4 per cent in quantities of 200 to 500 c.c., or with 10 c.c. of 2 per cent solution of sterile calcium chloride; (10) physiological rest of the cerebrospinal nervous system by morphine or its derivatives, after the diagnosis has been made and laparotomy performed.

TABULATION OF TREATMENT OF PERITONITIS

Preoperative — operative — postoperative

1. Nothing by mouth—Ochsner "Rest and Starvation."
2. Gastric drainage—indwelling nasal Levine tube.
3. Fowler position.
 - (a) Angulation of bed, 35°.
 - (b) Angulation of patient.
4. Morphine for pain or restlessness.
5. Prevent dehydration—amount lost by stomach + 3000 c.c.
 - Proctoclysis, Murphy.
 - Tap water + 10 per cent glucose.
 - Hypodermoclysis.
 - N/10 Saline.
 - Phleboclysis.
 - N/10 saline + 10 per cent glucose.
6. Prevent hypochloremia and alkalosis.
 - Replace fluids and chlorides lost in vomitus.
 - Intravenous method.
 - 2–4 per cent hypertonic saline.
 - 10 c.c. 2 per cent solution calcium chloride.
7. Surgical intervention.
 - Early operation for primary focus, with drainage.
 - Operations for intestinal obstruction.

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References

1. Deaver, John B., and Pfeiffer, Damon B.: *New York Medical Journal* Nov. 13, 1915.
2. Murphy, John B.: *Surg., Gynec. and Obstet.* June, 1908.
3. Dandy, Walter E., and Rowntree, L. G.: *Ann. Sur.* 59: 587, 1914.
4. Buxton and Torrey: *Journal of Medical Research* 15: —, 1906.
5. Heyd, Chas. Gordon: *NEW YORK STATE JOURNAL OF MEDICINE* Dec. 15, 1926.
6. Handley, W. Sampson: *Brit. Jour. of Surg.* 12: 47, 1925.
7. Ochsner, A. J.: *Boston Med. and Surg. Jour.* February 10, 1910; *J. A.M.A.* 36: June 22, 1901.
8. Clark, Alonzo: *Johns Hopkins Hospital Bulletin* April, 1897.
9. Fowler, George R.: *Ann. Surg.* 43: 231, 1906.
10. Carson, H. W.: *Lancet*, 1923, May 19.
11. Trout, Hugh H.: *Surg. Gynec. and Obstet.* May, 1913, 560.
12. Rowntree, L. G.: *Physiol. Rev.* 2: 116, 1922.
13. Orr, T. G.: *Amer. Jour. Surg.* 18: 279, 1932.
14. Heyd, Chas. Gordon: *Transactions, Amer. Assn. of Obst., Gyn. and Abd. Surgeons* 102–107, 1933.
15. Dudgeon and Sargent: *The Bacteriology of Peritonitis*, A. Constable and Co., Ltd., London, 1905.
16. Fauntleroy, A. M.: *Med. Record* Aug. 3, 1912.

NEWER METHODS OF TREATING PEPTIC ULCER, CONSTIPATION, AND INDIGESTION

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Twenty-four years ago in an Ether Day address at the Massachusetts General Hospital, I enunciated certain principles which have ever since found their application in the Cleveland Clinic in the development of certain methods of treatment and prevention of those diseases in particular which by virtue of their origin and nature we have termed kinetic diseases. Twenty years ago I performed the first of a series of operations in which adrenalectomy was either performed alone, or was combined with sympathectomy or with thyroidectomy or with both, for the purpose of lessening the "kinetic drive" to which these diseases are due. Later we not only added peptic ulcer to the list of the kinetic diseases but found that constipation and indigestion might be due to the same kinetic causes, and we found also that bilateral denervation of the adrenal glands gave more permanent results than adrenalectomy because of the tendency of the remaining adrenal to compensation. Recently we have found that unilateral denervation with division of the greater splanchnic nerve is as effective as bilateral denervation in many cases.

We shall cite certain case histories which offer evidence in support of our assumption both that peptic ulcer, chronic indigestion, and constipation may justly be termed "kinetic diseases" since they are due to pathologic physiology of the energy system, and that these conditions are ameliorated or cured by adrenal denervation, but first I shall discuss the rationale of this procedure in such cases.

That the psychic factor exercises a powerful control, not only of the gastric secretion but also of the entire digestive tract and digestive processes, is a matter of common experience, and that the adrenal glands are concerned in the production of these disturbances has been abundantly proved by the investigations of Cannon and others.

This power of the adrenal glands over

the gastro-intestinal tract would appear at first sight to make all animals above the level of the reptiles equally liable to peptic ulcer, to indigestion, to constipation. Yet we know that this is not the case for wild animals do not have peptic ulcer nor indigestion and even among humans, peptic ulcer and indigestion occur rarely in primitive man and are found most commonly among teachers, lawyers, physicians, clergymen, business executives, diplomats, and that large group in other walks in life that are worried and have many anxieties, have indigestion, are constipated. Among the different races those of a nervous, high-strung disposition are more liable to have digestive disturbances than are those of a more phlegmatic type. Thus peptic ulcer occurs more commonly in the Jewish and Latin races than in the Nordic races.

Where is the cause of this difference to be found? Anatomically it would seem that all animals and all humans possess alike an adrenal-sympathetic system, and that just as the heart performs the same function in each, the adrenal-sympathetic system should function alike in each with identical results. By such reasoning we are leaving out of account two other essential units of the energy system of man and animals, the brain and the thyroid gland. Let us study for a few moments the comparative anatomy of this energy system.

From the point of view of their control of energy we may consider the animal kingdom as divided into three groups, although of course no absolute grouping is possible as there must be an overlapping for some animals have characteristics which pertain to each of two of the proposed groups.

1. The first, which we call the protected groups, includes animals whose safety depends upon chemical or mechanical devices such as carapaces, quills, poisons, odors, or upon concealment, such as the armadillo, skunk, porcupine, alligator. These

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animals require for safety but little expenditure of energy, and therefore the whole energy equipment is relatively small.

2. The second group, which we call the pure energy group, includes animals whose survival depends upon the expenditure of energy in attack or escape such as the lion, fox, antelope, squirrel.

3. The third, the strategy group, includes those animals which depend mainly for survival upon the direction of energy by a controlling brain.

In animals in the second or pure energy group the adrenals are larger and the adrenal sympathetic system is more complex than in either of the other groups. In the protected group not only are all the units of the energy system relatively small but the adrenal sympathetic system is exceedingly simple in its connections. In both the pure energy and the protected groups the adrenal glands are larger than the thyroid gland; in man the thyroid gland is larger than the adrenal glands and in both these groups the adrenal sympathetic system is complex and more so in the pure energy group than in the strategy group. In a fox and squirrel, for example, the weights of the adrenal glands were respectively $3\frac{1}{2}$ and $7\frac{1}{3}$ times larger than the thyroid gland, while in man the thyroid gland weighs approximately twice as much as the adrenal glands.

The thyroid gland maintains the level of activity of the brain and its size therefore depends upon the rate and constancy of demands for energy production. The thyroid gland, therefore, has reached its highest development in man in whom the demands for energy are ceaseless. The size of the adrenal glands and the complexity of the adrenal sympathetic system depends upon the need for the sudden use of energy in attack or escape. This system has therefore reached its highest development in animals like the lion and tiger, in which there is need for sudden and fierce attack in securing prey, while between the times of attack or escape there is little need for energy as the time is spent in eating and sleeping.

In what way can these facts contribute to a better understanding of peptic ulcer?

The specific action of the adrenal sympathetic system as we have stated is

to inhibit every organ and tissue that is needed for the great muscular activity of the attack or escape. Among the organs most affected therefore are those of the digestive system.

Thousands of years ago in the ancestor of present-day man, we may believe that since his safety depended principally upon muscular attack and escape, the adrenal glands might well have been larger than the thyroid gland. Primitive man attacked, secured his food, escaped to the trees and slept. As the ancestors of man came out of the trees, however, as his hands guided by the developing brain developed new methods of sustenance by tilling the soil and domesticating animals; as the developing brain showed the advantages of co-operation with his neighbors, in times of stress and fear his adrenal sympathetic system still continued to act as if active physical struggle was required, and therefore the gastro-intestinal tract was inhibited. The physical activities of attack and escape remain among man's racial memories and although the highly developed brain of civilized man has devised religions, laws, customs and systems of education, yet it can not eradicate the racial memories which are woven in the protoplasmic net of inheritance. It follows that the mechanism by which motor acts are performed and the mechanism by which emotions are expressed are one and the same.

Civilized man is subjected to innumerable actions but much restraint. The more highly civilized the man is, the greater in number are the exciting stimuli, the greater the restraint.

Because of our complicated life, we have many fears—fear of the loss of money and property, fear of moral disgrace, fears as to social status and as to health. Man is beset by fears because of his memory mechanism, a mechanism that has made possible social and economic co-operation. This delicately poised social and economic relation is under constant strain. The driving force of fear and of its lesser form, worry, stimulates human beings to strivings, competitions, rivalries, and jealousies. The greatest and the most constant fear of man is fear of his fellow man. In the world of fears, worries, and anxieties, in which civilized man is engulfed, he fears just as the

lower animals fear, largely in the physical terms of his ancestral fight or flight. In consequence, the racial action patterns tyrannize over the remainder of the organism, especially in those individuals who have developed their brains to the greatest degree.

Initiation of action is the function of the special senses and of memory. Although there may be no physical danger, yet, upon receiving an adequate stimulus, racial action patterns throw the switches for full steam ahead, activating the muscles, the adrenals, the thyroid, the heart, the metabolism and the respiration, inhibiting simultaneously the digestive and procreative systems, and as the result of these repeated inhibitions, among other results indigestion, peptic ulcer and constipation may result. The incidence of peptic ulcer to which we have already referred is evidence of the validity of this reasoning. Other ulcers are constant; peptic ulcer appears in rhythms. Peptic ulcer has not only a rhythm related to the span of life, appearing more commonly in the active young adult period, but it also has a rhythm related to seasons of the year as it appears more often in the spring and autumn. It occurs more frequently in males, the incidence as compared to that in females being as seven to one. Peptic ulcer not only favors the human race and its most advanced members, it not only chooses for its incidence spring and autumn, and the active period of life, but it is selective even in its victims, as its periods of activity correspond with periods of work, worry, and fatigue.

Peptic ulcer, indigestion, and constipation are aggravated by influences that cause an increase of activity of the sympathetic nervous system such as emotion and focal infection, and is mitigated by influences that lessen the activity of the sympathetic system such as relaxation and holidays. Peptic ulcer is mitigated by any diet or medication that diminishes or neutralizes the acidity and stabilizes the motility of the stomach.

From these considerations it is clear that peptic ulcer itself is an end result; that it is a symptom, and not a separate disease. It is an example of pathologic physiology, not of pathologic anatomy, and the energy or kinetic system of man

is the mechanism which is involved in the pathologic physiology which produces a peptic ulcer.

It remains to consider how an ulcer of the stomach is established and maintained in the man in whom there is an overstimulation of the kinetic system.

Edward Martin and Carlson have shown that the most probable mechanism is the production of a sphincterismus at the pylorus by changes in the activity of certain components of the autonomic nervous system. This sphincterismus causes a break in the perfectly balanced mechanism at the pylorus whereby a balanced acid-alkali relationship is established and the gastric juice, being thus deprived of the alkaline duodenal fluid, rises in acidity and coincidentally the motility of the stomach is greatly increased.

Manifestations of increased activity of the sympathetic nervous system are frequently noted in cases of peptic ulcer, such as increased perspiration, increased nervousness, a tendency to tachycardia, excessive motility, tenseness, excitability, short temper; in other words, many of the general symptoms of mild hyperthyroidism and of mild neurocirculatory asthenia.

Another interesting and significant fact is that the incidence of digestive disturbances in hyperthyroidism is higher than in the normal population. Furthermore, to the high-strung, high-capacity victims of peptic ulcer, as to those suffering from hyperthyroidism or neurocirculatory asthenia, a holiday affords almost a specific relief. These considerations would seem to strengthen the hyperkinetic or neurogenic theory regarding the etiology of peptic ulcer.

If peptic ulcer is not a morphologic pathology due to exclusively local causes, but, on the contrary, is due to an excessive drive of the sympathetic system, then the administration of a drug, that would counteract the excessive action of the components of the autonomic system, would mitigate the pathologic physiology, namely, the spastic contraction at the pylorus, and relieve the symptoms. This is an established fact.

The seven biologic excitants of the adrenal-sympathetic system are pain, emotion, infection (foreign proteins),

hemorrhage, asphyxia (inhalation anesthesia), thyroid hormone, and adrenaline. If the kinetic theory as to the causation of peptic ulcer is true, then emotional excitation, infection, pain, thyroid hormone, need be the only biologic excitants to be discussed in a clinical sense. Pain certainly aggravates a peptic ulcer. Emotion and physical exertion are closely related. Both aggravate peptic ulcer, and equally do the toxins of infection. This leaves the thyroid hormone to be discussed. The most outstanding physiologic action of the thyroid hormone is to step up the activity of the brain and the adrenal-sympathetic system, hence emotionalism, hence digestive disturbances. This factor, we believe, is clearly related to peptic ulcer, as we have noted 58 cases in which peptic ulcer has been associated with hyperthyroidism. In these cases thyroidectomy has been followed by a cure not only of the hyperthyroidism but also of the ulcer. Doubtless there were many undetected cases of peptic ulcer among our cases of hyperthyroidism, as x-ray examinations would have revealed, for in hyperthyroidism digestive disturbances of every kind occur frequently and are taken for granted.

The above considerations offer the clue to the physiologic plan of management. The details vary with the personal equation and the inclination of the physician, and equally those of the patient. In many instances peptic ulcer can be rationalized out of existence. Happily, peptic ulcer passes by the more completely rationalized and controlled men and women who are occupying front line positions in civilization's forward march.

So much for the etiology of peptic ulcer and other digestive disturbances. In view of this etiology, what line of treatment is suggested?

The chemical damage due to the accumulation of the injuring gastric juice may be prevented by drawing off the highly acidulated gastric juice by a tube; equally is it prevented by emesis, by lavage, or by alkalis.

The sphincterismus may be relieved by demobilizing the kinetic drive of the brain by a holiday, by apoplexy, by softening of the brain, or by senility.

Although pyloroplasty and gastro-

enterostomy, or alkalis, are followed by immediate relief, the patient still is in full possession of the pathologic physiology, which continues to work on its original plan—continues to exercise its pathologic action. For a time after pyloroplasty or gastro-enterostomy, the local sympathetic mechanism at the pylorus, as the result of an activation of which a peptic ulcer was produced, is not reconstructed; but, in time, after either a pyloroplasty or a gastro-enterostomy, the innervation is reconstructed, and, in certain and altogether too many cases, the continuous excessive drive re-establishes the pathologic physiology and the ulcer. This we call a recurrence, but it is a recurrence strictly and only of the ulcer. The pathologic physiology remains unchanged from the first.

This is not equally true of resection of the stomach, for this procedure so extensively destroys the stomach, that the pathologic drive is unable to fabricate an excess amount of ulcer-producing hydrochloric acid and pepsin.

The cases we have been considering are the active ulcers, which usually occur in younger subjects or in the hyperkinetic types of men. The picture is different in individuals of an older, more quiet temperament, and especially in patients in whom obstruction at the pylorus is present. These are mostly cases of healed ulcers. The surgeon in fact operates to relieve the serious complication of a healed, or at least an inactive, ulcer. On the fine results in such cases, much of the good repute of the surgical treatment of ulcer rests.

This brings us to the consideration of an operation devised for the purpose of changing the mechanism whereby the pathologic physiology is produced, an operation performed at a vulnerable point in the adrenal-sympathetic system.

If, as we have argued, this unique disease is due to a long-sustained overactivity of the adrenal-sympathetic system, then a surgical interference with this system should afford a measure of immediate relief and in a period of time a steady improvement, such as follows thyroidectomy in a case of hyperthyroidism.

When there is obstruction at the

pylorus, we may assume that a healed or at least an inactive ulcer exists. In this case almost ideal results are secured by a simple gastro-enterostomy. When there is an active non-obstructive ulcer in an active, young, high-strung, worrying individual, then gastro-enterostomy is not indicated, because of the tendency to the formation of recurrent ulcers. Recurrences are more resistant to treatment than is the primary ulcer. The last estate is worse than the first. In the case of a recurrent, intractable ulcer in a young individual with a high-strung, worrying temperament, we seek to change the pathologic physiology by denervation of the adrenal glands, otherwise gastric resection is the operation of choice. This procedure is comparable to that employed by Dr. W. M. Scott in surgery of the sympathetic nerves for the relief of mega-colon.

The following case histories illustrate the effects of denervation of the adrenal glands upon chronic indigestion and upon intractable peptic ulcer.

CASE I. The patient, a woman 30 years of age, was first seen on July 22, 1931. She presented typical symptoms of neuro-circulatory asthenia; namely, cold, moist hands, a pulse rate ranging between 80 and 100 and nervousness. There was a diffuse enlargement of the thyroid gland. The basal metabolic rate was minus 3 per cent. The patient suffered from indigestion and was constipated so that she took cathartics daily. She had a poor appetite.

Adrenal denervations were performed on July 24 and 31, 1931. Gastric analysis before and after the second denervation gave the results as seen in Table I.

PROGRESS NOTES

Three months after the denervations the patient wrote: "About the second week I began to feel so much better I could hardly realize it. That terrible feeling like I

must weep over everything left me. I wasn't nervous and *my stomach got so much better than I could eat almost everything and had an appetite. I mean things had a better taste.* I can't remember of any time when food tasted so good as it did to me then and didn't bother me. My heart began to slow down also."

After the good time referred to in this letter the patient went to California. The preparation for the trip and the traveling proved to be too much for her and some of the good effects described above were overcome but only temporarily, for three months later, six months after the denervations, the patient wrote: "*My nerves and stomach are fine, especially my stomach. I feel like I have a new one.*"

In January, 1933, one and one-half years after the denervations she writes: "My stomach is still good. It is something I can hardly realize how it could be changed so quickly." The patient was last heard from in June, 1934, nearly three years after the denervations. In this letter although she complains of some subjective symptoms, she adds in a postscript, "To be able to eat is a wonderful thing, although I'm getting used to it now."

Comment

In this patient the indigestion and constipation entirely disappeared promptly after the denervations. This patient continued to complain of some subjective symptoms but always writes positively regarding her excellent digestion—sure proof that her recovery in this respect was complete.

CASE II. The patient, a man 52 years of age, was first seen March 23, 1933. He complained of severe abdominal pain, loss of weight and of appetite, and nervousness. Four months before we saw him he had experienced a sudden attack of severe boring epigastric pain. This was followed by repeated vomiting of recently ingested food. He was sick in bed for three weeks. Since that time he had noted increasing nervousness, tremor of the hands, irrita-

TABLE I

	After ingestion of Ewald Meal					
	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.	
Before second denervation.....	36	64	74	68	80	Total acid
	25	47	62	55	68	Free acid
Six days after second denervation.....	16	24	41	52	55	Total acid
	0	12	30	36	34	Free acid

bility, tachycardia and palpitation and he lost 13 pounds in weight. He continued to have almost daily attacks of abdominal pain which came on three to five hours after eating and were always relieved by food.

He had always been highstrung and hyperkinetic. His business, that of a sales director, required constant action and quickness of thought. He was interested in art and especially in the theatre. He had been a good student but not at the head of his class.

The temperature was 99°F.; pulse rate, 138; blood pressure, 140/92; basal metabolic rate, plus 9 per cent. The thyroid gland showed a symmetrical bilateral enlargement. The eyes were slightly prominent but there was no lidlag and no hippus; there was a fine rapid tremor of the hands. There was no epigastric tenderness but x-ray examination revealed an ulcer on the posterior wall of the duodenal bulb and also a diverticulum on the lateral wall of the second portion of the duodenum at the tip of which there appeared to be another ulcer. The stomach was hypertonic and showed hypermotility, being completely empty in three hours.

In spite of the normal metabolic rate it was obvious that the patient had an active hyperthyroidism. A duodenal ulcer was performed on five days later by a denervation of the left adrenal.

PROGRESS NOTES

For the first six days after the denervation the patient suffered from abdominal pain which was relieved by alkalies. He was kept on a Sippy diet during this time as during the preoperative period. Beginning with the seventh day the patient experienced no abdominal discomfort whatever and could eat anything although he complained of lack of appetite and aversion to food. The second month Sippy diet was prescribed without alkaline powders and the patient was sent home to return a month later for the second denervation. When he left the hospital his pulse rate was 72. The pathological report on the thyroid tissue that was removed was

colloid goiter with multiple adenomata.

He had absolutely no stomach distress and no indigestion. There were no objective signs of nervousness and the patient said that he felt calm and at ease. There were no tremors.

Gastric analyses made before and nine days after the denervation gave the findings as reported in Table II.

One month after the denervation the patient wrote that he was working part of each day and he adds "am doing splendidly." He was seen shortly after the date of this letter when he came to the clinic for observation. His pulse rate was 84. He had absolutely no stomach distress and no indigestion. There were no objective signs of nervousness and the patient said that he felt calm and at ease. There were no tremors.

Two months later the patient was seen again. He had been taking a modified Sippy diet. He had continued to gain weight and had felt well until 3 days before we saw him when he had an attack of nausea and vomiting with rather light colored stools. An x-ray examination showed a normal duodenal bulb and an apparently smaller diverticulum but there was still hypermotility of the gastrointestinal tract.

Six months after the denervation the patient was still following the modified Sippy diet but still had some distress. For a few days before we saw him he had taken only milk and cream with some relief. During these six months the patient had taken no alkaline powders. An x-ray examination at this time showed a slight deformity of the duodenum which was believed to be a healed ulcer.

Thirteen months after the denervation the patient wrote as follows: "I am pleased to report that my progress has been so satisfactory that I have failed in my expectation to see you more frequently. Have gained weight continuously and am free from the rapid pulse and extreme nervousness that prevailed before the thyroidectomy."

The patient was last seen in July, 1934, fifteen months after the denervations. He was having no physical trouble of any kind

TABLE II

	Fasting	½ hr.	1 hr.	1½ hrs.	2 hrs.	
Before denervation.....	43	55	80	91	119	Total acid
	17	34	56	71	91	Free acid
After denervation.....	30	21	23	18	18	Total acid
	19	9	6	0	0	Free acid

and was eating practically everything. He had gained 30 pounds in weight since his operation.

Comment

This may be classified as a 100 per cent cure. Both the hyperthyroidism and the peptic ulcer disappeared after the dekineticizing procedures.

CASE III. The patient, a man, 42 years of age, was first seen June 16, 1932. The patient had first noted pain in the epigastrium when the stomach was empty following an operation for acute appendicitis in 1922. The patient continued to have attacks of pain at frequent intervals, rarely being symptom-free. The pain was sharp and burning in character; occurred one and one-half hours after eating; was partially relieved by milk or other food and alkalies; awakened him at night and was worse when he was worried or fatigued. He had tried a modified Sippy diet, alkalies and rest, but these measures merely mitigated but did not entirely relieve the pain.

Seven years before we saw him the patient had a perforated duodenal ulcer, located just distal to the pylorus. This had been treated by inversion and closure without any resultant relief. One year before there was again a perforated duodenal ulcer which was treated by closure and a posterior gastro-enterostomy without any relief, and two months later the patient had hemorrhages indicated by tarry stools.

Nine months before we saw him the pains became so severe that the patient had to quit his work. He went to bed and took a strict Sippy diet with alkaline powders without relief. In the following month an x-ray examination showed a jejunal ulcer one inch from the stoma, which was functioning well. The stomach and jejunum were spastic and there was a deformity of the duodenal bulb.

Three months before we saw him another x-ray examination again showed the jejunal ulcer; the barium escaped through the pylorus and the enterostomy opening; the stomach and intestines were hypertonic; the colon was spastic. The pains were so severe that the patient was unable to work.

The patient was a nervous individual of New England stock—very alert, active, conscientious, and aggressive. The temperature was 98.2°F.; pulse rate, 78; blood pressure, 124/74; basal metabolic rate, plus 5 per cent. Abdominal examination showed diastasis of the upper recti with a ventral hernia. An x-ray examination revealed a "diverticulum or old accessory pocket from

a healed jejunal ulcer just beyond the gastro-enterostomy which functions well; hypermotility, most of barium being in right colon in three hours. Deformed duodenal bulb probably from healed ulcer. Barium passes rapidly through both pylorus and gastro-enterostomy."

Denervations of the adrenals were performed on July 5 and 13, 1932.

PROGRESS NOTES

When admitted to the hospital, the patient was following a rigid Sippy diet, taking milk and cream every two hours. Following the first operation he asked for an increase in diet as his ulcer pains had disappeared. At the time of his discharge from the hospital he was on a liberal diet and had no discomfort.

Two months after the denervations the patient wrote as follows: "My health seems to be improving steadily. For some time now I have been at the stage where I am unaware most of the day that I have a stomach. Occasionally I am reminded of it along toward evening but I find myself sleeping through the night quite regularly. I am back at work and am standing the gaff very well."

He was seen in December, 1932, five months after the denervations. He said he felt "infinitely better." He was practically symptom-free.

Seven months later he wrote: "It is interesting to reflect that this year, for the first time in three years, I did not spend the Fourth of July in the hospital. A year ago this time I was just about leaving your hospital. This year I spent the Fourth at a house-party in the Adirondacks and, with certain trifling exceptions, did what everybody else did."

The patient was last heard from in May, 1934, nearly two years after the denervations. At this time he wrote as follows: "I have for months now rarely had occasion to think of my health. Thanks to you it has become automatic. Yet I am not a model patient because I now smoke considerably and take a drink now and then. The symptoms which formerly troubled me have long since disappeared."

Comment

This is a 100 per cent cure in a case of intractable jejunal ulcer in which repeated operations had been of no avail. Unfortunately no postoperative x-ray examination was made but none is necessary for the clinical results speak for themselves.

2020 EAST 93RD STREET

THE PSYCHIATRIC POINT OF VIEW

BERNARD GLUECK, M.D.

OSSINING-ON-HUDSON

I

That individuals differ very markedly in their reaction to disease is well known, and often enough the physician feels highly rewarded when he has succeeded in converting a situation in which the disease has the patient, so to speak, to one in which the patient has the disease.

Such a victory is always highly significant, but it is especially so in those patients in whom a transient or more protracted somatic disorder attaches itself to an already existing disturbed equilibrium of the personality as a whole. The advent of the somatic disease furnishes under such circumstances a long-sought-for opportunity for a regression to infantile modes of reaction and for an exploitation of a real illness in the service of needs which relate to long-standing problems in the personality's total adjustment to the requirements of living. It is the great merit of present-day psychopathology and particularly, the psychoanalytic contributions to it, to have pointed out the inadequacy of the viewpoint that life adaptations have to do solely with environmental and accidental vicissitudes of human living. A more accurate evaluation is now possible of the great significance for the destiny of the individual of the internal, subjective world of impulse and striving as determinants of attitude and action. Disease, as an individual experience, whether mainly somatic or mainly psychological in its manifestations, is profoundly affected in its origin, course, and outcome by these subjective elements of the personality, since they more than anything else determine the personality's reaction to the event "disease."

The following case is illustrative of what we have in mind and is typical of a class of patients which is being encountered with much greater frequency than heretofore, owing to the improved co-operation between the general practitioner and the psychiatrist.

The patient, who was admitted to Stony Lodge on October 25, 1934, is an

unmarried white female, aged 40, who for the past two years has been more or less totally incapacitated because of a variety of gastrointestinal complaints for which a most searching investigation reveals no somatic pathology adequate to account for the patient's symptoms. On the other hand, the total-personality reactions of the patient, in attitude, speech, and behavior indicate clearly a marked regressive tendency to infantile modes of reaction; a clearly demonstrable wish to be ill, and tendency to an egocentric exploitation of her symptoms; a deeply rooted "attention getting" habitus and drive, and consequent resistance to cure, as well as a negation of positive signs of improvement.

The disorder began about two years ago, presumably with an attack of intestinal influenza and has been in the main progressive ever since, and chiefly characterized by complaints of severe epigastric pains upon intake of food, general weakness, particularly of legs, flickering in front of her eyes, spasmodic, painful contractions of the right upper quadrant of the abdomen, extending to the back, which is much worse after eating, sour eructations, salivation, dizziness, hot sensations, gagging at night, trembling over entire body, cessation of menstruation.

A significant phenomenon which should be taken into account in connection with evaluating these complaints is that while they are of the category of complaints, they are really given to the numerous physicians whom the patient has already defeated thus far, in a thoroughly non-complaining manner. On the contrary, the evidence is frequently unmistakable that the patient enjoys the verbalization of these complaints and the dramatization of them. None the less, she shows the evidences of her disorder.

On admission to Stony Lodge she weighed only 80 pounds, was helpless from weakness and emaciation, lying curled up in a bed which had to be equipped with numerous pillows and props as well as warming pads. She

usually lies on her abdomen, writhes, and contorts her body, patting and kneading various presumably painful parts thereof. Her sensorium and intellectual functions are intact. She is ultra-co-operative in any manifestations of interest in her complaints on the part of the medical and nursing staffs, but becomes petulant, resistive, and at times quite bitter and venomous in her complaints when contradicted or "neglected" according to her definition of neglect. She craves and demands continuous attention, and in spite of her precarious gastrointestinal functioning, is made readily happy and contented by having anything to take in her mouth and swallow.

In the course of attempts to cultivate in her a little realistic auto-criticism the suggestion was made that she be placed on one of the popular varieties of pre-digested baby foods. For a time she thrived much better on this, and only yesterday when a little additional pressure was exerted towards objectivity and maturity, she begged to be put back on the "baby food."

She said, "I don't know what's the matter with me. I am extremely dizzy. I am seeing spots for one hour. I am so glad you came up. I have a violent reaction in the right side of my abdomen, which pushes up to my back, because things don't seem to go down. This dizziness is the last straw. I have been trying to sit tight with the pain most of the day. I get contraction in the lower bowel. I get hot in my head, sick in my stomach. I have contraction of the rectum, an enormous amount of gas, a fluttering feeling, and get out of breath. Please don't think me a baby because I'm awfully uncomfortable, doctor. I haven't menstruated since the beginning of the summer—of course, the passing of mucus and little bits of blood from the bowels. But this takes the biscuit. I am so weak I can hardly get out of bed, my flicker. Be an angel and get me comfy. I have been sick two years. I went down from one hundred and ten pounds to eighty-one. I am a yellow old hag, who needs to be de-bugged and de-loused. [Laughs.] Don't tell me I have a sense of humor. You are being grand to me, and it's damned difficult to hang on."

Should an attempt be made in the course of this chummy, and to the patient obviously enjoyable monologue, to bring her tactfully down to earth by attempting some explanation of the psychodynamics involved, she impatiently and yet in a somewhat patronizing manner switches the trend of the conversation back to origins. The doctor's original diagnosis two years ago was "intestinal influenza," and there the matter rests. She calls the physician "my darling," is free and utterly "unself-conscious" about accidentally exposing her breasts and legs in searching for comfortable poses in bed, and showers one with her appreciation of the medical and nursing attention given her. At another time she says, "Doctor, don't you think I ought to change to baby food again; I keep pushing up all the time. Everything ferments and I keep making gas, which isn't very romantic. I keep making "garbie" (garbage) all the time. I know I'm a terrible nuisance all the time but I can't help it. I know that you understand me and that you're going to do everything you can to help, aren't you? This really is a physical thing, and don't you think we can get on a medical basis?" Sterile hypodermics, or for that matter any other medication, immediately relieves her complaints of abdominal cramps, gaseous distention, and pain.

Now while it is obvious that an attempt has been made thus far in this presentation to focus upon those phenomena which are expressive of the total, or personality reactions, I would not have you come to the conclusion that her somatic or part-function pathology has not been thoroughly investigated. While this is the first time that a psychiatric approach has been made to the case, she has been treated in the course of the past two years by a large number of general practitioners and nonpsychiatric specialists in Chicago, New York, and elsewhere.

She was brought to Stony Lodge from a first-class general hospital in New York City, where she had a most searching examination and study of somatic factors. Eight intestinal series were negative, except for a low atonic stomach. X-ray of the chest and gallbladder were negative. Blood count and blood chemistry normal. She has had daily gastric lavage and enemata, has been fed at one time for

five days by means of a duodenal tube, has been on insulin treatment and various specialized diets, and has been diagnosed as suffering from Addison's disease, glandular dyscrasia, gastrointestinal neurosis. On two separate occasions basal metabolism tests showed a minus 12.

A most careful physical, neurological and endocrine examination on admission to Stony Lodge was negative, except for marked emaciation, especially in legs and arms; a slightly deviated nasal septum; atrophic tonsils; palpable anterior and posterior cervical lymph nodes; marked emaciation of abdominal wall and surface discoloration due to a burn from an electric pad; a scar marking the site of operation for a ventral suspension; marked tendency to tenseness of abdominal muscles on slightest touch, but no evidence of pain or tenderness. There is some pigmentation of face and body, but not typically bronze in appearance. X-ray examination shows no calcification of suprarenal glands. Blood pressure, 120/74.

So much for the physical deviations. It is pertinent to a proper understanding of this case to mention at this point that the onset of her gastrointestinal preoccupation did not really take place two years ago, although the details of this event might incline one to an emphasis of this point. It was Christmas Eve, and the patient's brother and his wife, as well as some other relatives, had gathered for a family celebration. Suddenly, and quite out of a clear sky the patient began to cough, developed a fever, abdominal pain and diarrhea, thus unfortunately converting the Christmas party into a rather general preoccupation with her and her illness. The real onset of the difficulty, however, extends back some 13 years, when the patient was 27. She was visiting an aunt in St. Louis, was menstruating at the time, and similarly, quite out of a clear sky, she had her first intestinal attack. This attack occurred in the latter part of August. Some months previously she had also been to St. Louis on a visit and had become engaged to a man who later turned out to be quite worthless and the engagement was broken.

No distinct temporal relationship between this event and the onset of her

trouble can be established on superficial questioning of patient. The attacks recurred two or three times a year after that, always while she was at home, although she did a good deal of pleasure traveling during this time, and always while she was menstruating. Repeatedly they occurred in the month of August.

This went on for several years until we come again to an obscure and somewhat suspicious temporal relationship. Her brother was at the time at Harvard and fell ill with influenza. Her mother and she received the news and subsequently both had an attack, allegedly, of influenza. Matters became increasingly worse with the patient, requiring the joint efforts of internists, gynecologists, and surgeons. Vaccine therapy, appendectomy, and ventral fixation followed in rapid succession, but the patient did not recover until some two years later, when we come upon another obscure temporal relationship, namely, an apoplectic stroke on the part of her father which necessitated hospitalization. The patient got up from her long confinement in bed in order to be able to visit her father. There followed about eight or nine years of relative freedom from gastrointestinal complaints until the December, 1932, already alluded to. Here we again come upon a significant but less obscure temporal relationship. The patient, after having terminated another in a series of engagements, met and fell in love with an Englishman, some five years her senior, an ex-army man who had been more or less holidaying at Hollywood and Palm Beach. He behaved as though he reciprocated the patient's affection, but was apparently also a very practical-minded gentleman, for he did not permit his ardor to blind him to the possibility of acquiring along with the patient a substantial financial subsidy for life. He called it a "dot" but was specific enough to insist upon a guarantee of a fifteen thousand dollar annual income for life. This led to serious trouble between the patient, who was willing enough, and her relatives, particularly her mother, in the midst of which the present attack set in. The patient still desires this man and thinks she could be happy with him.

Now, no attempt has been made thus far to study and treat the patient

psychoanalytically and I am not in a position to undertake a critical or very precise causal definition of her symptoms or her general disorder, although from what has already been stated, the possibility of a psychodynamic envisagement of the entire problem forces itself upon one's attention.

In the background of this woman's life there is a ninety-two year old, very efficient and very successful maternal grandfather, who amassed quite a large fortune; a spinster maternal aunt who keeps house for this gentleman; another maternal aunt of whom the patient is very fond, and to whom she frequently turned for comfort. This aunt is happily married and has two grown children. The patient's father died of apoplexy, leaving no estate behind him. In the patient's eyes he was the most wonderful father, devoted, kind, but admittedly not very worldly or practical. The mother seems to be, from the management of her daughter's problems, a sound, practical sort of person. There is a brother six years younger than the patient, who is married, and a successful architect. The patient was an only child for six years of her life, indulged and pampered, especially by her father and grandfather, but was nevertheless sent to kindergarten at the age of five. However, just about the time of the arrival of her brother (it is not clear whether this occurred just before or just after the birth), she was withdrawn from school and turned over to a governess who tutored her until the age of twelve.

It throws some light upon the perspicacity of her parents to note the manner in which the arrival of her brother was announced to the patient. She remembers this very well to this day. She had been sent away to spend the day with her aunt and claims not to have had any inkling of the impending event. Later in the day the father came and announced to her that a little baby brother had arrived and brought her some gifts, which she found together with her little brother on arriving home. At any rate, she also gained a governess in connection with this event, did not return to school until six years later, when her brother was about six and took over her governess.

There is no particular advantage in

tracing in detail the patient's subsequent development other than has already been given in connection with the history of her illness. Although she had a very favorable beginning economically, culturally, and in personal equipment, and has had the advantages of a good formal education, much travel, and social opportunity, she is today, at forty, a rather pitiful spinster, not very good to look at and certainly not very easy to live with. She has defeated a great array of physicians in their struggle with her illnesses, has been engaged to be married on quite a number of occasions, always wittingly or otherwise finding herself frustrated in her love life. She is completely dependent economically upon her mother and still finds her greatest satisfaction in an exploitation of her invalidism. If I were to trace in detail her emotional development and use, I would have to do so on the basis of non-psychoanalytical data, and consequently with such important gaps as to make the total picture useless for a strict scientific evaluation.

But I believe I have furnished enough data for a more than fairly justifiable assumption that her complaints and disorders have not been definable in terms of organic or physical categories, certainly not in terms of an irreversible organic pathology, and that there is a unity pervading her difficulties and disorders which has a closer and more intimate relationship to her total personality, to the economics of personal and social adjustment, both on the causal and effectual sides, than to a specific pathology of any one or another of her bodily organs or part-functions.

In view of this patient's past history, her improvement after five months' residence in the hospital might be considered very gratifying indeed. She has gained a great deal of weight and physical strength, is regularly employed in the occupational therapy department, goes for long walks, and frequently attends the cinema in the village. She is much more objective and outgoing and less preoccupied with her subjective complaints.

Now while this patient has not had the benefit of a strict psychoanalytic therapy, it is very doubtful whether the improvement attained would have been possible had it not been for the complete shifting

of emphasis from the somatic to the psychological aspects of the situation which took place with her admission to Stony Lodge.

II

The absence, in connection with the foregoing clinical report, of the kind of data which only a psychoanalytic study of the case could have furnished, need not deter us from employing it as a clinical basis for the purpose of this paper. We have in mind a restatement of the psychiatric point of view, not only as a possibly helpful contribution to a clarification of the troublesome and somewhat futile controversies between the so-called functionalists and organicists, but especially in the hope that a restatement of this issue will add further to the helpful co-operation between psychiatry and other branches of medicine. This is not the first time that it has been my privilege to deal with this question, but I am digressing somewhat in this presentation of it from the usual manner of dealing with it, in that I am taking the liberty of indulging in a bit of biographical introspection. I am entertaining the hope, in so doing, of demonstrating to the non-psychiatric practitioner, at any rate, the evolution of my own interest in the psychiatric point of view, and how I was led to the present conception of it.*

It seems scarcely possible that more than twenty years have elapsed since as an eager and enthusiastic novice in the field of psychiatry I journeyed to Kraepelin's clinic in Munich in response to an insistent urge to challenge a certain dictum which was at that time propounded by the Kraepelinian School of Psychiatry. This dictum was to the effect that an individual's capacity to develop a psychogenic disorder was *prima facie* evidence of an underlying constitutional defect. It seemed to me then preposterous, and in my utter naiveté, quite unfair, to stamp an individual constitutionally defective because he developed a psychological disorder in the wake of and in response to

certain social-psychological experiences which at last had become unendurable to him.

I was at that time very much taken up with the rich clinical material of the Criminal Department of St. Elizabeth's Hospital in Washington. Important practical as well as clinical considerations made necessary a careful scrutiny and evaluation of psychopathological manifestations which could not be completely identified with the accepted nosological entities of that day. Not having been too excessively steeped in the prevalent psychiatric preconceptions, I took these manifestations at their face value and endeavored to understand them as reactions of the total personality to certain exceptionally trying conditions of life. These manifestations were in the nature of more or less acute and transient panic states of terror and confusion; flight reactions in the nature of more or less profound catatonic-like and depressive states, and efforts at defense and retaliation in the form of hallucinatory, delusional, and psychomotor phenomena in individuals who in some instances seemed to be burdened with constitutional handicaps for meeting exceptional stresses of life, but in many other instances manifested no discoverable indications of this nature.

The experiences of arrest and imprisonment obviously had the effect upon these individuals of psychological traumatism and serious frustration, the true psychopathological significance of which only became clear to me on my later acquaintance with the contributions of Freud. But this experience served to focus my attention on the causal significance of sociopsychological factors in human maladjustment and disease.

St. Elizabeth's Hospital, under the leadership of Dr. William A. White, was even in those days quite amply equipped for a dependable investigation of the chemical, toxic, and somatic factors in mental disease. It was well steeped in the materialistic and mechanistic traditions of the day which came in the wake of the brilliant contributions from the fields of physiology, biochemistry, and neuropathology. To a novice like myself, only slightly acquainted with the noble tradition in mental medicine which antedated

* The gist of what follows was presented at a symposium at a joint meeting of the New York Neurological Society, and the Neurological Section of the New York Academy of Medicine, November 1, 1932. It has not been published in its entirety before.

the nineteenth century and Darwin, a period when psychological phenomena were still accorded an adequate hearing, and being not at all acquainted with the psychological renaissance that had its birth and was reaching its adolescence in Vienna, the Kraepelinian dictum to which I have already referred undoubtedly assumed an undeserved importance.

At any rate, heedless of the possible consequences, I plunged into debt for the first time in my life and took myself off to Munich. I am sure that many of my contemporaries have shared with me the unforgettable experience of sitting at the feet of the late Professor Kraepelin and of coming in contact with the atmosphere of that clinic. As I realize my reactions in retrospect they were of two distinct categories. On the one hand, I was amazed and fascinated by the many things which were capable of demonstration in a mental patient that had utterly escaped my notice up to then. But I also had a different kind of reaction. It seemed to me that a very outstanding aim of the Munich enterprise was the justification of Kraepelin's nosological categories.

While I was not unacquainted with the wise caution of Adolf Meyer and other American psychiatrists against an uncritical acceptance of the Kraepelinian nosological schematization, it was not difficult to subordinate this question to what seemed to me the more pressing one of psychogenesis in psychopathology. Strangely enough, it was an organicist, one of the wisest of them all, the late Professor Alzheimer, who gave me the most encouragement for the pursuit of my later work. I shall always consider it an outstanding bit of good fortune that after leaving Kraepelin I spent a little while with Professor Ziehen in Berlin.

If I needed any further encouragement towards a complete emancipation from rigid nosological preoccupations, I certainly gained it from my contact with Professor Ziehen. Day in and day out I watched the meticulous search for and attention to all the clinical facts in a patient, no matter what their ultimate value might come to be in the total scheme of things. There was no deliberate or unwitting slighting of any fact, no attempt to bring it in line with any preconceived nosological formulae—a most

encouraging and valuable reaction to the impression of a closed system, at any rate as far as the dementia-praecox-manic-depressive problem was concerned, that one inevitably carried away from Munich. It was here too that I saw for the first time some classical and quite dramatic cases of major hysteria, a circumstance which made the necessity of going westward and home, instead of journeying east to Vienna, a most regrettable and poignant disappointment. Those who have known Professor Ziehen know what an earnest and meticulous scientist he was and how completely interests of a biochemical, bacteriological, and neuropathological nature were represented at the Charité in his day. But psychological phenomena—qua psychological phenomena—were accorded the same respectful attention as other kinds of clinical manifestations.

No psychiatrist who has had the good fortune of contacting with the personalities that it was my good fortune to meet that memorable Fall of 1911 can fail to appreciate the debt one owes to such an experience. But I was at that time, so to speak, "hipped" on a certain subject. I wanted to know the "why" of certain psychopathological phenomena; I wanted to know, moreover, whether the common strains and stresses of life incident to human experience and human relations had any place in the causal scheme of psychopathology. My prison psychotic cases were free from toxic, traumatic, or other physical disorders that might have accounted for the difficulty, and while some of them might have been placed by a stretch of the imagination within the categories of dementia-praecox or manic-depressive, it left me no nearer any sort of satisfactory understanding of what was actually happening. Moreover, these acutely and severely ill people, when placed under the humane, intelligent, and unprejudiced régime of a mental hospital, frequently improved or even recovered very rapidly. I did not know then that what I was searching for was a "dynamics" of psychopathology. No enlightenment with reference to this came to me from my European experience.

The enthusiasm and excellence of Plaut's laboratory certainly convinced one of the causal significance of syphilis,

but in a paper published somewhat later I revealed my dissatisfaction, and naïveté perhaps as well, when I failed to find in a most meticulous serological and neuropathological study of the paretic the explanation why one paretic was gay and euphoric and another in the next bed to him spread a thick gloom all about him by his depressive and hypochondriacal complaints. Rudin's figures and enthusiasm for genetics helped a lot where hereditary elements were in evidence. But even here no explanation was forthcoming as regards the why and meaning of symptoms.

Krapelin's and Ziehen's remarkable skill in detecting and demonstrating symptoms certainly helped to enrich one's phenomenological horizon, but that was practically all, even if one did find comfort in being able to label a patient with a name. What did the patient have to do with all of this? Was he merely a passive and unresponsive object of all these various causes that were alleged to be responsible for his disorder? What was the relation of ordinary, every-day manifestations of grief and joy, of shyness and embarrassment, of anger and love and hate, which we observed in ourselves and our acquaintances and friends to these dramatic manifestations of our patients? These were legitimate questions for a novice in psychiatry.

When one's friend sought comfort and encouragement in his distress, or sympathy in his sorrow, we did what we could with the plain and commonplace facts of human relations at our disposal. One accorded to the common frustrations and disappointments and privations incident to the bread-life and the love-life of man their due significance as causes of unhappiness, maladjustment, and malaise and proceeded to relieve the distress incident to them by such measures as common sense and one's concern or friendship or love for another human being prompted. But as soon as these distresses acquired a degree of profundity which brought them within the category of one or another of the "ologies" one was told by a materialistically obsessed nineteenth century science that all these precious and humble facts in the relation of man to man were inadequate and even meaningless in any scheme of scientific psychiatry.

Above all, one was to shun all possible allurements of a "teleology" in human relations as the Devil shuns holy water, for man was nothing but a machine, a biological-mechanical contrivance for the transformation of energy which expressed itself in human life and human conduct. To a novice like myself this mechanistic conception did not seem to suffice. For one thing, while it may have accounted for the physiological processes back of human action and conduct, it certainly fell short of furnishing any clue whatsoever to motive and purpose, the touchstones of human relations.

My prison-psychotic patients came to me frequently from veritable dens of iniquity, having lived for months or years under an atmosphere of ignorance, starvation, hate, and cruelty, in some of the military and naval prisons of that day, and at a time when men who had been deprived of normal sexual outlet for months and even years on a stretch were still being sentenced to ten years of hard labor under confinement if detected in a homosexual act. It did not require toxic or chemical or organic explanations of any other kind to account for their psychopathological reactions to that type of experience, and while phenomenologically one could observe similar psychological reactions in patients suffering from undoubted organic disease of the central nervous system, it did not seem inconsistent to attribute the prison-psychotic manifestations to psychological and social causes.

III

I fear I've already burdened your patience beyond endurance by this recital of personal reminiscences, but whether you believe it or not, I am not motivated by any desire to talk about myself. I am using my own mental attitude as illustrative of what must have been the mental attitude of other young psychiatrists of that period if the clinical material with which they had to deal offered any challenge to their minds, and indeed they had already become acquainted with the stimulating and confusing contributions of Sigmond's theory. The difficulty of understanding and managing their psychiatric terms of purely structural

cal issues would not have been minimized even if they had been fully acquainted with the brilliant contributions in neuro-anatomy and neuropathology of such men as Brodmann, Nissl, Alzheimer, Cajal, and Von Monakow. The facts of brain localization, while they had not reached the rich status of today, did not succeed in eliminating the suspicion that any inclusive notions of brain-mind parallelism only told part of the story. Such a well informed neuropathologist as our own Adolf Meyer stated the issue squarely as far back as his Kankakee days: After having demonstrated at an autopsy to a coroner's jury the cause of the accidental death of a psychotic patient, he was asked by them to show them the brain changes which were responsible for the man's insanity, to which he replied that the explanation of that was to be sought in the record of the patient's life and not in changes in the brain.

No matter how thoroughly acquainted our imaginary psychiatrist of twenty-odd years ago might have been with the physiological researches of that day, he could not have escaped the suspicion that a higher type of integration than physiology had been able to demonstrate must lie at the basis of human conduct. He might have anticipated what Cannon said in 1927, when he spoke of "affect" as "a function" of the animal's behavior. In terms of human conduct, man as a social being transcends the various physiological processes which enter into the functioning of a biological organism, the "whole" being greater and different than the sum of its parts. The same might be said with reference to such enlightenment as might be derived from the emerging research of twenty years ago in the field of biochemistry.

If he was at all challenged by his clinical material he still would have been troubled by the following queries:

(1) Since structural, physiological, and chemical factors do not suffice to account completely for the cause of mental disease, what about psychological and social factors? Are psychological factors to be accorded the same validity and significance in the causal chain as non-psychological factors in the investigation of mental disease?

(2) Is the concept of so-called "func-

tional disease" a valid concept, or must disturbance of function always depend upon structural modification?

(3) Is one compelled to depend upon pluralistic or parallelistic conceptions of mind or is there a possibility of a unitary concept according to which psychological phenomena are subject to laws of their own equally applicable to normal and abnormal functioning?

(4) What about the questions of meaning and purpose in the fields of psychology and psychopathology? Specifically, is the functioning of the personality as a whole—that is activity or passivity—which underlies man's conduct as a social being, free or deterministic or fortuitous? Is mental disease the fortuitous or haphazard reflection of an underlying disorder of function or structure or does it possess meaning in terms of human motive and human purpose?

(5) Is one to accord the various forms of psychotherapy which have been more or less successfully employed from time immemorial any scientific validity, and is there anything to the significant findings of the hypnotic state? Or, must therapy of mental disease be limited to indirect methods by way of physical, chemical or biological channels?

He need not have been deterred from posing these questions by the materialistically prejudiced scientific clamor of that day. If he had an inquiring mind at all, he must have discovered the joker in this scientific game, namely, that the refusal to accord psychological data scientific validity was not science at all but the crassest kind of prejudice, an inheritance of nineteenth century materialism.

I am speaking of conditions existing two decades and more ago, but the same is true today to a very large extent, unless one accords an honest and unprejudiced hearing to the contributions of psycho-analytic psychology of the past thirty-five years and more. These contributions have furnished an adequate answer to the queries we have stated above, and to a great many others besides, which are at last promising a truly scientific approach to mental disease.

IV

It is quite unnecessary to reiterate here with any degree of detail the con-

contributions of psychoanalytic psychology to the understanding and management of the problems of psychiatry, and neurology and disease generally as well as to the elucidation of so called normal functioning.

No better statement of these relationships has been written since the memorable publication in 1915 of Jelliffe's and White's textbook on nervous diseases. Notwithstanding the fact that many valuable contributions which specifically affect the problem of mental disease have been made since then by Freud and others of the psychoanalytic school this textbook was the first successful attempt, as far as I know, at a complete elaboration of a unitary concept of disease of the personality as a whole. In addition to a dependable statement of the "what" of these disorders it attacks courageously the problems of the "how" and the "why," of the entire question of personality disorder and maladjustment.

Mental disease is a disorder of the personality as a whole. The personality as a whole embraces all those structures and integrations of function which are familiar to us from the fields of anatomy, physiology, and biochemistry, and also those higher integrations which are conditioned by the racial heritage of man and which begin to emerge with the birth of the individual and his first contacts with other human beings.

These higher integrations at the psychic level are intended not only to serve the immediate adjustive requirements of man in his impacts with reality, but are engaged from the moment of birth until the death of the individual in the important task of maintaining a satisfactory adjustment between two sets of forces which contend for the mastery of the individual and his conduct, namely, the forces of nature or instinct and those of nurture or culture. Disease and maladjustment of the personality as a whole, no matter under what guise they may emerge inevitably and unescapably have some relation to this internal, subjective aspect of the personality.

Thus the causes of the disorders of the personality as a whole (of mental disease) cannot be defined by reference solely to the immediate precipitating event whether this event be a brain

tumor, or a vascular brain insult on the one hand, or a frustrated love affair or some other form of frustration or privation on the other hand. The real explanation of mental disorder lies in the universal and what to all intents and purposes has come to be the natural intrapsychic conflict of civilized man.

The immediate precipitating event, whether it is of an organic or toxic or psychological nature, inhibits or destroys the capacity of the self to deal adequately with this intrapsychic conflict, and the symptoms which a given disorder reflects are indicative of the specific way in which the conflict is being dealt with. Now all of this, of course, must remain unintelligible if one limits his vision to a psychology of consciousness and refuses to accord equal consideration to the vastly more important psychology of the "unconscious."

Neither can an adequate conception of psychopathology be had if one follows the *tabula rasa* theory of human nature and indulges his narcissism to the extent of insisting that since the new individual comes into the world with a clear slate upon which his destiny might be written at will, he can mold this new individual entirely according to his desire. This is the doctrine advanced by those modern psychophobists who call themselves "behaviorists."

Jelliffe has stated the social heritage implications of psychopathology with almost poetic beauty when he said in that memorable textbook:

Even in possibly the earlier days of Indo Germanic beginnings is found this dual aspect of the individual and the race and even more interestingly the warning lest the polarity be lost and the inertia of death attained by an equalization of the opposing forces. Beware of being caught in the pathway of opposites, purports to be a quotation of Hindu antiquity which in modern mechanics means 'being caught on dead center'."

He says further:

The formulations followed in this volume assume that whatever is called 'Nature' has provided for this contingency and has accumulated such phyletic memories (Semon's engrammes) as to push forward with greater dynamic potential one of these pairs of opposites namely the phylum maintenance. Hence race propagation is

the loaded side of life's revolving wheel, and self-preservation its obedient opposite. It is not a mere coincidence that theology should have phrased the same thought in the statement that "he that findeth his life shall lose it: and he that loseth his life for my sake shall find it."

Intrapsychic conflict, the tensions and anxiety incident to the opposing forces within the constitution of man, is thus seen to be the natural destiny of man. So-called normality reflects the achievement of a satisfactory adjustment between these contending forces. That this so-called normality ordinarily goes hand in hand with somatic integrity does not signify at all that structural and physical health is an absolute guarantee against those failures of adjustment which are reflected in the field of psychopathology. It is not an uncommon experience in the practice of neurology that a diagnosis of "functional disorder," so-called by exclusion, after a most meticulous search for somatic factors leaves one disappointed.

I think we are justified in following Freud, when he says that "The meaning of a symptom lies in its connection with the life of the patient." The wish-fulfillment character of sensory falsifications such as illusions and hallucinations is not invalidated by the circumstance that these manifestations might be released by a toxemia or an encephalopathy.

The compensatory or defensive character of a delusion is not disproved by the circumstance that it occurs in a paretic. While the compulsion neurotic differs from the hysteria in the psychological dynamics and content which underlie these disorders, they both illustrate types of situations in which the claims of instinct have experienced an unnecessarily excessive restriction or denial in response to excessive taboos imposed upon the individual by that side of his nature which reflects the claims of culture and education. The explanation of the psychoneurosis does not lie in the psychoneurotic's friction with his environment but in the intrapsychic conflict. In so far as the claims of society or culture—claims which the individual is obliged to heed almost from the moment of birth—constitute one element of this conflict, they have become internalized and to all intents and purposes part of the nature

of the individual, and have acquired a degree of significance and power approaching the significance and power of instinct itself.

In the case of the psychotic the situation might be said to be the reverse of what happens in the psychoneurotic without invalidating the conception that basically the same forces are at work as in the psychoneuroses. Through the abandonment of the sense of reality and of auto-criticism the claims of culture are increasingly ignored. The difficulty here, obviously, is primarily with all those forces of control and adaptation which are embodied in the psychomotor equipment of the conscious self. Any traumatization of this equipment, whether of somatic or toxic or psychological nature, may initiate the regressive trend which makes possible the uncritical release, as occurs, potentially, in the normal dream state, of the instinctual drives which had been mastered in the service of reality before the onset of the psychosis.

It must be clear by now that the point of view which I am defending is the psychoanalytic approach to psychiatry. There is no justification for the criticism that this approach is in any way antagonistic to scientific method. Psychoanalysis is to traditional psychiatry what histology is to anatomy: it is an extension and refinement of the psychiatric instrument. It had its origin in an endeavor to find a more reliable instrument for the definition and the treatment of psychopathological disorders. Its entire phenomenological and conceptual structure has been built up out of clinical experience with psychopathological manifestations, and where conceptual constructions outdistanced empiricism Freud never hesitated to point to this. The psychological mechanisms which came to light in connection with the study of the dream have been proved to be valid by earnest investigators in practically every civilized part of the world. The concepts of the "unconscious" and of infantile sexuality as well as the so-called libido theory are no longer controversial topics.

The application of the psychoanalytic instrument to psychiatry naturally goes beyond mere description and prognostication on the basis of spontaneous outcomes of certain symptom complexes. While it

has stimulated a much more minute and careful observation of the manifestations of psychical disorder, it aims furthermore to discern the meaning of these revelations, the "whys" and the "wherefores" of the patients' symptoms. It goes beyond this, and viewing disease as an endeavor, albeit an unsuccessful endeavor, at adaptation, it postulates the question in each case: "What is the patient trying to achieve by means of his disorder?" Or, in other words, what need is the neurosis or psychosis fulfilling? This is a very important step in advance of an approach which saw in these disorders merely evidences of failure. That every neurosis or psychosis represents a failure of adaptation cannot be gainsaid, but it is also true that every disorder of this nature is capable of revealing to us the specific issues which created the problem and which the patient is endeavoring to solve by means of his disorder.

The significance for the destiny of the individual of such factors as hereditary predisposition, native endowment, developmental vicissitudes, and accidents of life, is in the final analysis most accurately evaluated when viewed in the light of their effect upon this internal, dynamic play of forces. It is my thesis that the effect of somatic pathology upon the destiny of the individual can likewise be illuminated to the profit of patient and physician or surgeon when due consideration is given to this play of antagonistic forces within the personality.

It does not in the least invalidate the scientific approach to a somatic disease to include in the scrutiny and management of it, the fact, that whatever else it may be, it is also in the nature of a stimulus to the total personality, an experience to which the individual is obliged to react, and the nature and character of this reaction frequently depends more upon the type of personality one is dealing with, than upon the nature of the somatic disorder. Indeed, at times it is the maladjustment of the personality itself which makes possible and necessary the somatic disorder. Our chief concern then becomes, as in the case which I have cited, not so much to rid the patient of an existing symptom, but to free him of the need for symptom formation. This is, of course, particu-

larly the case in the so-called strictly psychogenetic disorders, when a correct therapeutic procedure always calls for a subordination of the claims of the symptoms to the requirements of the personality as a whole.

The defensive nature of the disorder of the patient referred to earlier, even in the absence of a thorough-going psychoanalytic investigation of her case, must be obvious. The resort to such a crippling of personality as she has eventually achieved must be a manifestation of conflict or maladjustment of the total personality. Naturally, I am not assuming from the manner in which I speak of this situation, something in the nature of conscious and deliberate intention. Neither is her problem understandable in terms of contemporary issues only, but requires an adequate appreciation of the historical background and evolution of her personality.

The outcome in a given disease depends not only upon the efforts the physician puts forth in combating the disease, but also and frequently enough, particularly so, upon what the patient himself does to his disease. He may see it as a stimulus to the release of all his potentialities for recuperation and life and the battle is won without much interference on the physician's part. But he may also see in it an opportunity for a release of a death impulse which no physician's skill in dealing with the somatic disorder is able to check. The somatic disease may, as we have seen, express a problem which cannot be defined in terms of the chemical or anatomical laboratory, but its implications extend into the laboratory of life as it is actually lived in the home, the school, the playground, the workshop, and so on.

This view of the matter does not necessitate an ignoring of the manifold somatic issues of a traumatic or toxic or constitutional nature which may enter into the determination of human conduct and human relations, but it is imperative to scrutinize these somatic factors not only for their effect upon the individual as a biologic organism, but as a human personality and social being.

The inescapable limitations of space do not permit of a thoroughgoing consideration of the full implications of the topics

I have so briefly touched upon, but since I am endeavoring to focus your attention upon the rôle of personality in disease I am obliged to attempt at least a bare outline of the psychopathologist's view of this question of human personality. I shall assume that we need not concern ourselves here with the structural and physiological aspects of the matter. But I think it might be helpful to indicate at the outset how frequently we are obliged to condemn something in the conduct of man as a social being which we recognize as natural and healthy from a biological standpoint. Unless, indeed, we belong to those rare natures who have succeeded in acquiring a kind of concept of biology which embraces the social implications of life and conduct.

At any rate, the antagonisms between the biological and social requirements of man are universal and permanent. The unconditioned dispositions which man brings with him at birth have to undergo a degree of repression and taming and transformation in order to meet the requirements of social adjustment which is difficult and painful at its best. Exposure of the infant and child to a too severe process of socialization of his biological nature renders difficult or impossible the indispensable degree of satisfactory living out of the life of instinct and leads to those pathological manifestations of personality and conduct which we know as the various distortions, ineffectual compromises, and substitutive modes of gratification which constitute the neurosis.

Somatic disease is frequently employed as a substitutive mode of gratification of a thwarted instinct. No greater love is

man capable of than the love some patients bestow upon a so-called colitis or cardiac palpitation. Conversely, the failure to subject biological nature to the necessary degree of taming and control is reflected in the manifestations of perversion, insanity, and criminal conduct.

Psychoanalytic psychology, which more than any other approach to the understanding of the human personality has illuminated these matters for us, carries the promise through its special technic of reconditioning the individual to a more adequate capacity for dealing with this internal and inevitable conflict. Death alone frees the individual from the burden of adjustment. Unfortunately, the somatic disguises which patients employ in dealing with their conflicts are apt to elude us if we are too steeped in a materialistic conception of the personality.

Conspiracies between the physician and the patient's unconscious motivations tend to foster and put a premium upon deception. The substitutive forms of gratification become fixated; medicine taking, dietary rituals, surgical castrative indulgences, and the doctor's devotion to the case combine to create a situation which renders the process of reconditioning unnecessarily difficult and sometimes impossible. The secondary and often very substantial gain from illness in denying a troublesome aspect of one's own nature or in gaining mastery over one's environment determines the patient to hang on to his illness with all the might of his unconscious, instinctive strivings, and the defeat of our efforts is a foregone conclusion.

STONY LODGE

CANCER COMMITTEE TO HOLD EXHIBIT

An exhibit of the facilities available in New York for the diagnosis and treatment of cancer and for the care of the needy cancer patient is being planned by the New York City Cancer Committee, in conjunction with a number of hospitals in the City, to be held at the Hotel Plaza, May 14 to 20. Admission is free and all are cordially invited to attend.

The hospitals which have so far accepted the invitation to participate in the Cancer Committee exhibit are:

Bellevue Hospital and Division of Cancer of the Department of Hospitals, Kane Pavilion of the Home for Incurables, Lenox Hill Hospital, Mount Sinai Hospital, Memorial Hospital, Montefiore Hospital, New York City Cancer Institute, New York Hospital, New York Infirmary for Women and Children, New York Skin and Cancer Unit of the New York Postgraduate Hospital, Presbyterian Hospital, St. Luke's Hospital, St. Rose's Free Home for Incurable Cancer, Visiting Nurse Service (Henry Street), Woman's Hospital, Welfare Council of New York City.

BRONCHOGRAPHY AND BRONCHIECTASIS

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There is probably no aspect of diseases of the lung upon which bronchography has not thrown considerable light in recent years. In tuberculosis, lung abscess, bronchiectasis, benign and malignant tumors, and in obscure diseases of the lungs, the application of the bronchographic method has greatly clarified our conception of the disease process present, often proving our principal means of establishing an accurate diagnosis. This method has been of outstanding value in two distinct ways: first, in the diagnosis of the pathological lesion present in the lungs; second, in its precise localization to a bronchus and its corresponding pulmonary segment.

Amiel Glass has detailed with admirable exactness the anatomy of the bronchi and lung segments, thus demonstrating the definite and constant relationship of a bronchus to its particular lung segment.¹ With this knowledge, therefore, it is now possible to predict with confidence whether a lesion will be found in the posterior, anterior, or axillary portion of the lung field. In operations upon the chest, such as drainage of a lung abscess, pneumonectomy or intrapleural compression, this knowledge is vitally important. In lung abscess, for instance, it may determine whether the outcome will be entrance into the free pleural cavity, with disastrous results, or immediate drainage, with subsequent cure.

The scope of this paper does not allow enlargement upon this aspect of the work. Its purpose is to demonstrate the value of bronchography in the diagnosis of diseases of the chest, particularly with reference to bronchiectasis. This procedure has provided a remarkably accurate method for ascertaining the anatomical condition of the bronchial wall. In cases where early disease of the bronchi is suspected confirmation must await bronchographic findings. Sometimes, when no pathological process has

even been suspected, bronchography has revealed the presence of bronchiectasis. Finally, various forms of bronchiectasis, now recognized as one of the commonest diseases of the lungs, have only recently attained clinical classification. Indeed, the dry and hemoptotic forms have been established as entities only since the introduction of this method. As a complication of other diseases of the chest, particularly lung abscess, tuberculosis, and obstructive lesions, bronchiectasis has been shown to be a most important factor. In lung abscess, after the original lesion has been drained, continued cough and expectoration may be due to an adjacent involvement of the bronchial wall. The cause of hemoptysis in an apparently healed tuberculosis of the upper lobe may be discovered in an unsuspected bronchiectasis of the lower lobe. The persistence of symptoms following the removal of a benign tumor or foreign body of a bronchus has been explained by the presence of infection and bronchiectasis behind the obstruction. Bronchography is the only available method for the definite demonstration of the extent and character of these complicating bronchiectatic lesions.

The cases have been chosen to present both clinically and bronchographically the development of diseases of the bronchi from their earliest manifestations to their most advanced stages. They are divided into four groups. The first, showing cylindrical dilatations and varicosities, is composed clinically of cases of chronic bronchitis usually associated with a chronic sinusitis. The second includes a group exhibiting more extensive damage to the walls developing in the course of a severe bronchopneumonia. The third group comprises cases presenting the classical textbook picture of advanced bronchiectasis with extensive involvement of the bronchi. The fourth, a large and important group only recently



Fig. 2



Fig. 1

classified, shows the development of bronchiectasis as a complication of a specific condition in the chest, such as lung abscess or tuberculosis.

The earliest changes in the walls of the bronchi are seen in cases of chronic bronchitis usually associated with a chronic sinusitis. The history in these cases may be that after one of the childhood diseases such as measles or pertussis the patient was left with a chronic cough causing little or no expectoration. In later years many of these patients develop a sinusitis with a postnasal discharge which aggravates the cough and expectoration. Clinically these patients are not seriously ill. The cough is the most annoying symptom, expectoration being slight. Physical examination may reveal only a few râles at the bases, or may be entirely negative. In such cases bronchography reveals only some mild changes in the contour of the bronchial wall. This is manifested by a pouching of the bronchial wall confined mainly to the larger bronchi, or more distinct changes such as varicosities and cylindrical dilatation of the bronchi. This cylindrical dilatation is shown by the fact that the bronchi do not diminish in caliber as they extend toward the periphery. Occasionally the changes may be more marked. (See Figure 1.)

This is the bronchogram of a patient 25 years of age who, since pertussis in infancy and pneumonia at 3 and 8 years of age, has had a cough with slight expectoration. A few years ago, following the development of a chronic sinusitis, both the cough and expectoration increased, the latter, however, never exceeding $\frac{1}{2}$ oz. daily. The bronchogram shows marked cylindrical dilatations and varicosities of the bronchi with some changes in the terminal portion. The rôle of sinusitis has been emphasized in these cases of chronic bronchitis, not because of its etiological importance, but because of its influence in bringing about or adversely affecting episodes of subacute or chronic pneumonitis and so increasing the damage to the bronchial wall. Therapy in these cases is directed to the cure of the lesion in the upper respiratory tract.

The next group presents evidences of destruction of the bronchial wall follow-

ing immediately upon initial infection. These changes occur as a result of a severe type of inflammatory disease of the lungs—a so-called suppurative bronchiopneumonia. In these cases of severe bronchiopneumonia, however, the bronchiectatic cavities may be few and small, or numerous and severe enough to cause death. An example of the very early formation of a bronchiectatic cavity is seen in the following case. (See Figure 2.) The patient is a boy of 18 who, 20 days before admission to the hospital, developed high fever and a dry hacking cough. The fever subsided somewhat at the end of the week, but the patient then began to cough up thick, green, purulent, non-foul sputum. For the next few weeks he ran a septic temperature with cough and profuse sputum. The purulent nature of the expectoration was its most striking characteristic. X-ray showed a pneumonic process with a faint suggestion of a fluid level within the infiltrated area. Bronchogram revealed an early terminal dilatation of one of the right lower lobe bronchi.

What the ultimate result will be in this type of case cannot be predicted, for nobody has as yet followed these early cases sufficiently long to be able to foretell with confidence. Bronchography has begun to reveal to us the earlier phase of this disease. However, we do see many cases whose past history is similar to the one above and who enter the hospital a few years after initial acute illness only because of increased cough and profuse expectoration. Bronchography will show marked bronchiectasis in many of these cases. The case presented above may represent the early phase of this disease.

How rapidly an advanced stage may develop in these cases is shown by the patient who, after appendectomy, developed a postoperative atelectasis which, in turn, was followed by a severe bronchiopneumonia. A month later bronchoscopy revealed thick pus in the right lower lobe without definite bronchiectasis. Two months later a bronchogram showed extensive bronchiectasis in right lower lobe. (See Figure 3.)

In some instances the patient may succumb to the infection in the acute stage. Figure 4 is the bronchogram of a man of 40 who had had asthmatic attacks for 20



Fig. 3



Fig. 4

years. Following a severe asthmatic attack patient was given sedatives which left him unconscious for 36 hours. He developed, thereafter, fever, septic in course, and profuse purulent sputum. Bronchography showed the presence of large bronchiectatic cavities. The patient died from the severity of the infection. (See Figure 4.)

Many of these patients, studied for a few years, have shown changes in the extent of their lesions; but there has been little relationship between their clinical symptoms and the extent of their pathological lesions. Some, showing decrease in lesions, have exhibited no corresponding diminution of symptoms, and vice versa. It is in this group, showing the early development of bronchiectatic lesion, where injury to the bronchial wall has not yet progressed to the stage at which restitution is impossible, that therapy might be of some avail. Pneumothorax in these early cases has some-

times proven of definite value. Although it has not diminished the size of the bronchial dilatations, it has had a favorable influence upon the cough and expectoration.

The next group, possibly the final result of many of the cases described above, presents the typical textbook picture of bronchiectasis. These cases show the classical signs and symptoms of the disease with marked clubbing of fingers and toes, paroxysmal cough, and expectoration of large amounts of sputum—the usual cases recognized in the period before the introduction of bronchography. Figure 5 shows a severe form involving all the lobes of both the right and left lung. The patient was 22 years old. At the age of 5 he recovered from a severe attack of influenza. Several members of his family died from the disease at that time. Since then he has had occasional attacks of bronchopneumonia with increasing amounts of



Fig. 6



Fig. 5



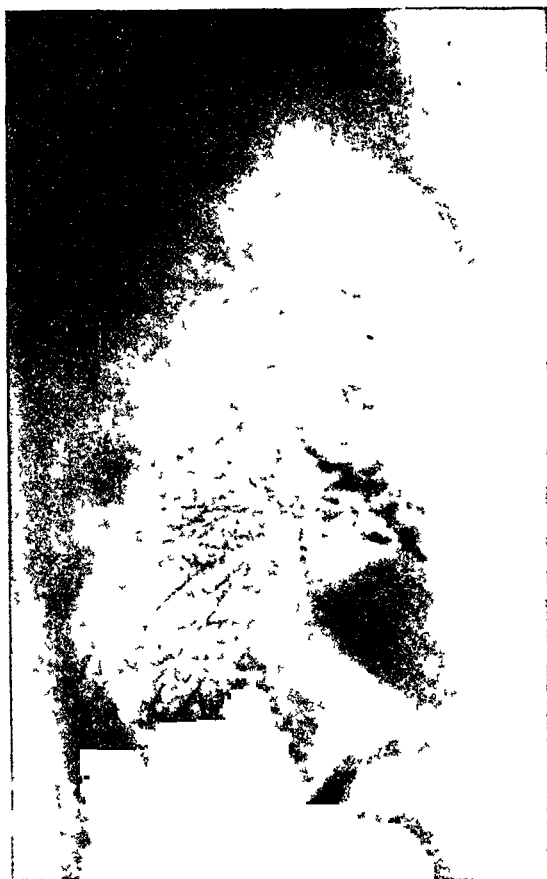


Fig. 7



Fig. 8

sputum. The bronchogram shows large bronchiectatic cavities throughout the entire lung. These cases form a pathetic and utterly hopeless group, even from a merely palliative point of view. They succumb as a result of severe and progressive bronchopulmonary disease, pulmonary hemorrhage, metastatic brain abscess, or cardiac complications.

The fourth group, consisting of a miscellaneous collection of cases that show development of bronchial changes following specific conditions in the lung, is perhaps the most important. These cases are separated, not because their pathogenesis differs from those we have just discussed, but because their importance has only recently been recognized. As has recently been emphasized by Neuhoof, Potter, and Murphy,² bronchiectasis is an almost constant phenomenon in chronic tuberculosis. Not only is it found in the bronchi in the vicinity of the lesion, but it may be

discovered accidentally in other portions of the lung and found to be the cause of continued cough and expectoration. In adequate thoracoplastic operations bronchiectasis in the lower lobes has accounted in some cases for continuing cough and expectoration.

Destruction of the bronchi is not only an invariable sequel of a chronic lung abscess but often, as well, the predominant feature of the disease in the chronic stage. The so-called "lattice lung," with its extensive fibrosis and bronchial cavitation, is not infrequently met with in long-standing cases. An excellent example of the value of bronchography, not only in revealing the true nature of a lesion, but also in localizing its exact position for operative intervention, is shown in Figures 6 and 7. Four days after submersion this patient developed fever, cough, foul expectoration, and right lower anterior chest pain. X-ray showed an abscess in the lower portion of the right

lung. He was operated upon posteriorly. Since then he continued to cough, expectorating about 8 oz. of green nonodorous material. Two years later he was admitted on account of his persistent cough and expectoration. Bronchoscopy showed bronchiectasis of the right middle lobe and the right lower lobe, especially in the anterolateral branch. The question of the correct operative approach now arose. Bronchography showed the essential lesion to be in the right middle lobe. In this case bronchography localized the lesion, revealing its nature and extent and, in addition, the striking fact that the posterior approach of the first operation, two years before, could not possibly have drained the original abscess.

Obstructive lesions of the bronchi, whether due to a foreign body or to a bronchial lesion, benign or malignant, will, if present for any length of time, cause an infection behind the obstruction, with the subsequent development of bronchiectasis. Often removal of the obstruction does not cure, owing to this complication. Figure 8 shows the severe bronchiectasis which developed behind an obstructing fish-bone in the bronchus.

Since the clinical syndrome of dry bronchiectasis can only be confirmed by means of bronchographic studies, its

recognition is of comparatively recent origin.

In the hemoptotic form, recurring hemoptysis is the outstanding symptom. Many of these patients have very few symptoms referable to the lungs. Bronchography, however, often shows bronchiectasis of a fairly severe nature. Invariably, because of the hemoptyses, these patients are treated for years at sanatoria.

The importance of bronchography and its vast field of usefulness have been briefly indicated in the various groups discussed above. Each group in itself could properly be the subject of an extended discussion. The subject has been presented in this fashion to indicate the prevalence of bronchial lesions and to emphasize their importance. In the earlier stages we are hoping by some simple measures, as pneumothorax, to arrest the progress of the disease to its hopeless final stage. With the aid of bronchography we are able now, at any rate, to detect the earliest lesions and to direct our energies toward the relief, if not cure, of the disease at a favorable time.

103 EAST 78TH STREET

References

1. *Am. Jour. of Roent. & Rad. Ther.* March, 1934.
2. *Ibid*

THE CHINESE LAUGH LAST

The western world has laughed for years at the Chinese use of toad poison as medicine. Now it begins to seem that the joke is the other way around. The *Lilly Physician's Bulletin* relates that during the last five years Dr. Chen and his associates have made an extensive investigation of toad poisons. The work was begun with Ch'an Su, a commercial preparation of the Chinese toad poison, sold even today at the drug stores. The Chinese have used this for centuries in toothache, gum bleeding, and so on.

For comparative studies, twelve different species of toads were collected from five continents. By chemical methods different active principles were isolated in pure form. They can be classified under five headings: ergosterol, epinephrine, bufagins, bufotoxins, and bufotenines. Epinephrine exists in large amounts. For example, *Bufo marinus*, the Jamaican toad, has more than four times the total amount of epinephrine in

man. Of course, in the toad it occurs in the skin glands, but in higher animals it is present in the adrenal glands.

Both bufagins and bufotoxins have a digitalis-like action. It was found that four of the bufagins are more powerful than ouabain, and ten toad principles more potent than digitoxin. Some of the bufotenines raise blood pressure to such a level that their activity is equivalent to 1/10 that of epinephrine. The toad apparently does not make use of its poison. It can be stimulated or scared by a dog, but it will not squirt poison. The poisonous glands are not essential to life. They can be extirpated and the toad continues to live indefinitely.

One of the touches of nature that "make the whole world kin"—or grin—appears in an Omaha medical journal. It reads: "Will the person who borrowed Dr. Prime's lantern some three years ago please return it so that Dr. Prime may use it for a while.

PROGRESS IN THE DIAGNOSIS AND TREATMENT OF PERNICIOUS ANEMIA

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SYRACUSE

The years following Minot and Murphy's announcement¹ of a successful dietary régime for a previously fatal disease have been followed by an amazing and confusing literature on pernicious anemia. Not only have methods of treatment changed rapidly for the better, but clinical and laboratory studies have become so refined and improved that each passing year has given us more exact methods for diagnosis. Comparing the diagnostic and therapeutic data available and generally utilized in 1927 to that of the present, one cannot help but marvel at the tenacity of physicians in their tireless effort to bring still another disease under control.

The present article is necessarily but a brief résumé of some of our present-day diagnostic and therapeutic conceptions of the disease. From the general clinical aspect pernicious anemia presents several new points of view, possibly little appreciated in the years when the profession was, by reason of poor prognosis, less anxious to detect the condition. It now takes the attitude that all cases of anemia should be thoroughly investigated, irrespective of age, and the presence of other obvious disease entities. It is well known that pernicious anemia may occur in patients under 30 years of age. Occasionally it is detected in patients well beyond the allotted span of life, and all do not have grey hair and blue eyes. Again, another definite disease such as myxedema,² gastric carcinoma,³ syphilis, or arteriosclerosis in the aged may be the snare and delusion that prevents one's appreciating that true Addisonian anemia may also, in a given case, be present.

In this section of the country we rarely see a macrocytic blood picture except in pernicious anemia, gastrointestinal malignancy, cirrhosis of the liver and in long continued gross dietary deficiency, although it has been pointed out by Minot and Castle⁴ that "in any type of anemia, due to defective blood formation macrocytosis may be present, and it even occurs

occasionally in hemolytic jaundice." The anemia of gastric carcinoma is more frequently of a microcytic type, especially if the neoplasm is bleeding, although occasionally there is evidence of a hyperchromic⁵ or normochromic anemia. Despite these facts, the absence of increased blood destruction and positive x-ray evidence of neoplastic disease should serve to differentiate gastric new growths from pernicious anemia, even though the malignant case shows a macrocytic anemia. A further important point must be considered: It is well known that gastric carcinoma and pernicious anemia may coexist, and that in the same patient one or the other disease may appear first.³

Numerous observers⁶⁻¹² have recently pointed out that macrocytic anemia may be present in certain cases of cirrhosis of the liver. Cases we have observed have shown either a microcytic, normocytic, or macrocytic blood, similar in this respect to the situation in gastric carcinoma.

Although one must consider the diagnosis of cirrhosis of the liver in any case of anemia, he must appreciate, as was stressed by Fellingner and Klima,⁷ that the blood count is normal in early cases of hepatic cirrhosis and that, as the disease progresses, hypochromic anemia may be followed by hyperchromic.

The neurological manifestations of the disease, although usually fairly characteristic and involving the posterior and lateral tracts, or both, are often so atypical that one is indeed pressed to differentiate from central nervous system syphilis, multiple sclerosis, and peripheral neuritis. It has been pointed out by Russel, Batten and Collier,¹³ Hunt,¹⁴ and Grinker and Ernestine²¹ that the neurological symptoms may precede the anemia; again¹⁵ that the patient may present no symptoms or signs pointing to nervous system involvement, yet post-mortem lesions of the cord are found; also that the picture may be of the tabetic type.

The question of peripheral neuritis occurring in pernicious anemia has been much debated but there is some evidence to indicate that it may occur^{14, 15, 16}. It is not generally appreciated that clinical evidence of spinal cord changes has been noted in more than 80 per cent of a large group of carefully studied cases^{21, 22}. It is possible that this lack of appreciation has been partially due to our anxiety to relieve the patient of his anemia as quickly as possible, being less concerned about the indefinite nervous symptoms.

The more recent developments in hematologic technic have added greatly to our knowledge of diagnosis and prognosis. By means of the hematocrit and ocular micrometer, it is possible to estimate indirectly and directly the size of the red blood cells, thus differentiating the macrocytic, normocytic and microcytic anemias, one from the other. It is our impression that studies directed toward the estimation of the volume index and mean corpuscular volume are more to be relied upon than most color index calculations. This statement is made first, because of the common experience that rarely can two observers read a hemoglobinometer at the same figure, secondly, the majority of hemoglobinometers are based on a different standard as representing 100 per cent hemoglobin.

The determination of the icteric index, Van den Bergh reaction,²³ and urinary urobilinogen in hematologic relapse are valuable, although frequently neglected procedures. In a series of 35 cases of pernicious anemia taken from the University Hospital records, the icteric index was increased in 25 of 26 cases in which it was estimated, it is also significant that in almost every instance one finds a positive indirect Van den Bergh and an increase in urobilinogen in those patients presenting an increased icteric index.

The estimation of the reticulocyte count is of extreme importance, in order that the effect of initial therapy may be prognosticated. In our untreated cases in relapse, the reticulocytes have numbered between 0.1 and 1.1 per cent, the majority revealing percentages between 1 per cent and 5 per cent. After the first few days of treatment, before the erythrocytes have increased to any extent,

these vitally stained cells have, in some instances, increased to levels in excess of 30 per cent—a definite indication that hematologic improvement is shortly to follow.

Who among us has not been bewildered by the variety of preparations offered as a better product than its competitor for the treatment of the disease? Calf's liver, pig's liver, fetal liver, horse liver, liver extract by mouth, subcutaneously, intramuscularly and intravenously, autolyzed liver, pig's stomach (with or without iron), combinations of liver extract and desiccated pig's stomach, and so on, *ad infinitum*.

Each worker in the field has, by experience, chosen, after trial, an effective remedy, and we shall but mention a plan of treatment, similar to the one advocated by Murphy,¹⁰ that in our hands has been uniformly successful in the treatment of the anemia. In relapse 6 c.c. of concentrated liver extract is given intramuscularly, after estimating by a half c.c. intramuscular dose, whether or not the patient is sensitive. If no fever or reaction results in 2 hours following the half c.c. intramuscular injection, the remainder of the 6 c.c. (representing 200 grams of liver) is introduced intramuscularly into the gluteal region. A week later 3 c.c. is given intramuscularly and thereafter the same dosage once weekly. A point of some interest is that the single, intramuscular 3 c.c. dosage of concentrated liver extract, given but once weekly, probably represents more available potent material than the patient would obtain, were he to eat one pound of liver each day.

Other treatment, often a valuable adjunct, is Dil. HCl, for those patients presenting digestive disturbances particularly diarrhea. In certain cases, after rapid regeneration of erythrocytes, the red blood count and hemoglobin fail to increase satisfactorily after a level of $3\frac{1}{2}$ to 4 million is reached. In such instances the color and volume index is occasionally found to be below 1.00 and it is at this point that the administration of adequate inorganic iron by mouth appears to be of distinct benefit in aiding a further increase in the hemoglobin and erythrocyte values. Satisfactory preparations of iron are Ferric ammonium citrate 6 grams a day,

reduced iron 1 to 2 grams a day, or ferrous sulphate,^{17, 18} 9 grains a day. It is felt that a satisfactory response is obtained if the red cells increase $\frac{1}{2}$ million a week, although these figures vary greatly in individual cases, the response being greater in those patients having the lowest counts when treatment is instituted.

It is of some importance that the red blood count be maintained at a level of about 5,000,000 or more, as it would appear that such individuals are the least likely to develop neurological manifestations. Once the desired red count and hemoglobin percentage has been attained, the intramuscular injection of 3 c.c. of the concentrated liver extract, given once in 3 or 4 weeks, is usually sufficient to maintain a satisfactory level, although some cases, particularly the aged, pregnant or lactating women, and those patients harboring infections, and so on, may require one injection a week; rarely a case may be maintained on a 3 c.c. injection administered once in 6 weeks.

Those cases presenting objective or subjective neurological symptomatology, have been treated weekly with 3 c.c. of the concentrated extract, and we are able to say that of the patients we have seen at the University Hospital and at the Free Dispensary during the past year, no case has failed to improve on this régime, and at least three, unable to support or transport themselves, have improved miraculously. One of these severely affected cases has had, in addition to liver treatment, physiotherapeutic measures for muscle relaxation. However, the one neurological case showing the greatest clinical improvement had no such physiotherapeutic treatment.

The question naturally arises as to what constitutes adequate treatment. In most instances the anemia is not a serious problem, if sufficient potent material is administered, and the real difficulty presented to the physician is the prevention or amelioration of neurologic complications. We are of the opinion that patients with red blood counts of 4 million are not adequately treated and it is well known that cases with red blood counts in excess of 4 million may occasionally develop serious, rapidly progressing neurological complications.

Meulengracht¹⁹ has declared that "the longer the hematologic features were controlled by liver and liver extracts, the greater was the incidence of myelopathy."

The experience of Minot and Castle²⁰ is emphatically the reverse of this dismal outlook. In more than 100 patients they have treated adequately with liver extract, no increase of existing lesions has occurred and no evidence of cord lesions has appeared for the first time.

Goldhamer²¹ and his associates, studying a large group of cases with neurological manifestations, have noted subjective improvement, irrespective of the type of adequate treatment, in about 50 per cent of their patients, and objective improvement in about 2 per cent.

A report by Grinker and Ernestine,²² read in 1933, held that "liver therapy is not efficacious in improving or preventing degeneration in the central nervous system . . . the majority of cases of combined degeneration of the cord develop rapidly at the onset and then progress slowly, no matter what therapy is employed."

Haden²³ is of the opinion that "the neurologic complications need never develop if the patient is co-operative and has been fully and continuously treated." Intensive therapy, he believes, will also ameliorate strikingly the neurologic symptoms after they have developed. He further states that "with intensive therapy the erythrocyte count should be well above normal. The volume of the cell is certainly the best index of the result of treatment. So long as macrocytosis of the red cells persist, the treatment is not adequate and the deficiency responsible for the disease is not fully met. I have yet to see a patient develop a neurologic lesion if the adequacy of treatment is judged on such a basis." Expressing a similar note concerning the necessity of adequate, continuous treatment, Murphy¹⁶ has pointed out that the "red blood cell level should remain preferably at or above 5,000,000 cells per cu. mm., and the cells themselves should be normal in size and shape. Although the occurrence of symptoms is an important indication of inadequate treatment, the absence of symptoms or a feeling of well-being is neither sufficient evidence that the blood is remaining

normal nor that the patient is in satisfactory condition to avoid progression of the nerve disturbances."

It is our opinion that every effort should be made to keep the erythrocyte count above the average normal figure and that more intensive therapy should be instituted the moment any symptoms or signs of neurologic involvement present themselves, irrespective of the red cell counts and hemoglobin levels. To date the patients we have treated, in the manner heretofore described, have developed no demonstrable neurological lesions for the first time, and all cases with already existing neurological symptoms have improved, at least subjectively.

Prior to the advent of liver extract for parenteral use, the cost of oral treatment for some patients, was almost prohibitive; in addition, the powdered and liquid extracts were not particularly palatable, although it may be said that a not unpleasant tasting desiccated hog's stomach preparation is now available. Parenteral liver extract has obviated the former difficulties of expense, the physician is sure of the dosage, and also that absorption will take place. The patient is not made responsible for eating liver, taking hog's stomach or liver extract, and the concentrated liver extracts such as we are now using, necessitate only infrequent injections. During relapse, or until the hemoglobin and red cells reach the normal figure, the cost of the liver extract, is about ninety cents a week (1 ampoule). The cost of maintenance dosage averages approximately thirty cents a week (1 ampoule in 3 weeks). Thus it is obvious that such a plan of

treatment is by far the most inexpensive program available today, and at the same time, it is believed, the most satisfactory.

Summary and Conclusions

(1) A review of the more recent diagnostic and therapeutic conceptions of pernicious anemia has been presented.

(2) Thorough clinical and hematologic investigation should be made in all conditions in which anemia is found, because of the not uncommon coexistence of pernicious anemia and other disease entities.

(3) The physician's greatest responsibility is the prevention or amelioration of nervous symptoms.

(4) The author is of the opinion that neurologic manifestations need not appear if patients are adequately and continuously treated, and that subjective improvement may be expected in the large majority of cases already showing nervous system symptomatology.

(5) It appears that concentrated liver extract, administered by the intramuscular route, is the most satisfactory method of treatment.

Acknowledgment

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References

1. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet, *J.A.M.A.* 87:470, 1926. A Special Diet for Patients with Pernicious Anemia, *Boston Med. & Surg. Jour.* 195:410, 1926.
2. Means, J. H., Lerman, J., and Castle, W. P.: The Coexistence of Myxedema and Pernicious Anemia, *New Eng. Jour. Med.* 204:243, 1931.
3. Conner, H. M., and Birkeland, I. W.: Coexistence of Pernicious Anemia and Lesions of the Gastrointestinal Tract. 1. Carcinoma of the Stomach, *Annals of Int. Med.* 7:89, 1933.
4. Minot, G. R., and Castle, W. B.: Editorial Note, *Year Book of General Med.* Page 387, 1934.
5. Cheney, G.: The Anemia of Gastric Cancer; Its Response to Therapy, *Folia Haemat.* 52:51, 1933.
6. Van Duyn, John, 2nd: Macrocytic Anemia in Diseases of the Liver, *Arch. Int. Med.* 52:839, 1933.
7. Fellinger, K., and Klima, R.: Untersuchungen über Anämien bei Leberzirrhosen, *Wien Klin. Wchnschr.* 46:1191, 1933.
8. Heath, C. W.: Klinische und experimentelle Beiträge zur Frage: Leber und Blutbildung, *Folia Haemat.* 51:391, 1934.
9. Wintrobe, M. M., and Shumacker, H. S., Jr.: Occurrence of Macrocytic Anemia in Association with Disorders of the Liver, Together with Consideration of the Relation of

This Anemia to Pernicious Anemia, *Bull. Johns Hopkins Hosp.* 52:387, 1933.

10. Schulten, H., and Malamas, B.: Über Veränderungen der roten Blutkörperchen bei Lebererkrankungen, *Klin. Wchnschr.* 11:1338, 1932.

11. Gamma, C.: Über Veränderungen der roten Blutkörperchen bei Lebererkrankungen, *Klin. Wchnschr.* 12:348, 1933.

12. Wright, D. O.: Macrocytic Anemia and Hepatic Cirrhosis, *Amer. Jour. Med. Sci.* 189:115, 1935.

13. Russel, J. S. R., Batten, F. E., and Collier, J.: Subacute Combined Degeneration of the Spinal Cord, *Brain.* 23:39, 1900.

14. Hunt, E. L.: Neurological and Mental Symptoms of Pernicious Anemia, *NEW YORK STATE JOURNAL OF MEDICINE.* 34:99, 1934.

15. Osler, Wm.: *Principles and Practices of Medicine*, 11:749, 1930.

16. Murphy, W. P.: Maintenance of Normal Blood in Pernicious Anemia by Means of Intramuscular Injections of Solution of Liver Extract, *Amer. Jour. Med. Sci.* 186:271, 1933.

17. Fullerton, H. W.: Treatment of Hypo-

chromic Anemia with Soluble Ferrous Salts, *Edinburgh Med. Jour.* 41:99, 1934.

18. Minot, G. R., and Castle, W. B.: Editorial Note, *Year Book of General Med.* Page 378, 1934.

19. Meulengracht, E.: Verhütung und Behandlung der Rückenmarksstorungen bei perniziöses Anämie, *Klin. Wchnschr.* 12:1163, 1933.

20. Minot, G. R., and Castle, W. B.: Editorial Note, *Year Book of General Med.* Page 355, 1934.

21. Goldhamer, S. M., Bethell, F. H., Isaacs, R., and Sturgis, C. C.: The Occurrence and Treatment of Neurologic Changes in Pernicious Anemia, *J.A.M.A.* 103:1663, 1934.

22. Haden, R. L.: Discussion on Diseases of Blood, *J.A.M.A.* 103:1676, 1934.

23. Fairley, N. H., Mackie, F. P., and Billimoria, H. S.: Anemia in Sprue; Analysis of 67 Cases, *Indian Jour. Med. Res.* 16:831, 1929.

24. Grinker, R. R., and Kandel, E.: Pernicious Anemia; Results of Treatment of the Neurologic Complications, *Arch. Int. Med.* 54:851, 1934.

STRIKING RESULTS WITH SYNTHETIC VITAMIN C

Synthetic vitamin C, called ascorbic acid, is producing unexpected conquests of disease, the British Association for the Advancement of Science was informed by Prof. A. Szent-Györgyi, the Hungarian chemist who played a major rôle in the artificial manufacture of this important vitamin, according to a report in the *Diplomate*, organ of the National Board of Medical Examiners. A certain kind of hemophilia, the mouth disorder known as pyorrhea, certain forms of hemorrhagic nephritis, and several other diseases against which medicine was helpless, are seemingly being cured by ascorbic acid. It does not cure hereditary hemophilia, the report says.

"This is the more striking since these pathological conditions have not been thought to be connected with lack of vitamin," Professor Szent-Györgyi explained. "These curative effects suggest that humanity is suffering much more gravely from a lack of vitamin C than has hitherto been supposed."

Disfiguring colorations of the skin brought on by illness are also made to disappear by ascorbic acid. The skin of patients with Addison's disease can be bleached out again by the use of this substance.

The complete exploration of vitamin C was accomplished in record time. In the short space of two years vitamin C has been identified, its chemical structure determined, and it has been made synthetically in the laboratory. The pure, highly concentrated vitamin C acid has been made

available for industry and medicine. Hungary—represented by Professor Szent-Györgyi, who is director of the Institute of Medical Chemistry, Szeged University—Switzerland, England, and other countries have worked together through their scientists in this great chemical conquest. "It is pleasant to note that this unparalleled advance is due entirely to the closest and friendliest international collaboration," Professor Szent-Györgyi said as he spoke before British scientists.

It is predicted that the rôle of ascorbic acid in life may be even more important than is now realized, for there seems to be no cell-life in higher organisms without ascorbic acid.

Young doctor (to impatient creditor)—If you must come every few days with your account you might at least bandage your head so that people will take you for a patient.—*Vart Hem.*

"What are you giving your cows now in the way of galactagogues?"

"Oh," replied the milkman, "their sustenance is wholly of vegetable origin, rich in chlorophyll and opulent in butyrateous qualities."

"Let me have a pint," said the professor.—*Colorado Medicine.*

FOREIGN BODY IN THE HEART

Report of a Case with Retention of a Large Needle with Recovery

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Cases of successful removal of missiles and penetrating instruments from the heart have been on record for many years. Fischer¹ in 1868 collected from all available previous literature 452 cases of heart and pericardial wounds. He gave a very complete history of the subject and an extended description of the anatomico-pathological lesions met in the different cases. He showed that wounds of the heart are not constantly fatal and sought to establish the symptoms and diagnosis as well as to show the therapeutic treatment of his times.

The first case of successful recovery following the lodgement of a needle in the heart is described by Fischer as that of Gerard's in 1834. The needle passed through the sternum into the wall of the right ventricle. The patient lived six years the cause of ultimate death not being stated. Fischer compiled a large number of instances of healed wounds of the heart containing foreign bodies carried about for years without apparent disability.

Thirty years later Loisson² collected 61 cases which had been observed in that interval. He divided his report into wounds caused by needles (23) and those caused by penetrating instruments (38). His descriptions of the needle injuries are of particular interest in connection with the case to be described. The mortality was 14 of the 23 cases or 61 per cent. None of these was due to infection. In none of Loisson's cases was the wound of entrance through the sternum as in Fischer's case or as in the one to be reported here—but all were through an intercostal space. The needle was fixed in the left ventricle (in 3 cases), right ventricle (2 cases), left ventricle and mitral valve (1), right ventricle and tricuspid valve, right ventricle and intraventricular septum and right auricle 1 each. In two cases where the point was protruding it eroded the endocardium

and the auricular wall of the intraventricular septum situated near it. In another case the diaphragm was eroded and perforated. In two other cases the repeated rubbing movement caused a hole in the right ventricle.

The cases in Loisson's series which recovered where the needle could not be removed were three in number. In Foy's³ case in 1887, an inebriated medical student plunged a needle into his heart. The pericardium was opened and the eye of the needle seen at the surface of the right ventricle. The muscle was superficially incised. It buried itself further with each systole and could not be reached. The patient recovered completely without cardiac symptoms. It is not stated how long he lived. In Macdougall's⁴ case in 1895 a girl of 15 accidentally plunged a needle into her breast in the third left intercostal space a half inch from the sternal border. The needle made excursions synchronous with the pulse and disappeared under the skin. An incision was made over the extremity of the needle seen through the skin. It buried itself and was not recovered.

There were no symptoms following this and the patient remained well "a long time after the accident." In a case of Stelzner's⁵ in 1887 a young man forced a needle into his heart while intoxicated. At the end of twelve hours he had pains, dyspnea, and intense sensation of friction over the apex of the heart. He collapsed in 36 hours. A part of the fifth rib was resected, the pleura being accidentally opened while incising the pericardial sac. The needle was found penetrating the right ventricle transversely. Several ineffectual attempts were made to extract it. The patient developed pneumothorax and pleural effusion. All symptoms progressively improved.

The earliest case of successful removal of a needle from the heart dates back to



Fig. 1. This film was made immediately after the insertion of the needle on April 26, 1934.

1835. In case No. 40 of Fischer's series, O'Connor⁶ reported a case of a needle insertion directly into the second interspace but the report is uncertain whether it was situated in the lung or heart. There were signs of "acute inflammation of the heart" and increased respirations, which subsided when the needle was removed. Callender,⁷ however, claims that his case report in 1873 was the first authentic one. A pewterer, aged 31 years, ran a needle through the fifth left interspace in a fight. The skin overlying the entrance was incised and the needle withdrawn. He had a successful recovery.

In 1888, Foot⁸ reported the case of a child brought to him at Meath Hospital with a needle in the heart, accidentally plunged there by the mother. The eye of the needle moved with the pulse. It was withdrawn by a rotary motion to lessen chance of hemorrhage. There were no further ill-effects. Turner⁹ in 1896 gave a report of successful removal of a needle in the heart of a two-year-old child by rotary traction through a skin incision. No harmful effects were noted. Prior¹⁰ in 1897 gives the case of an asylum

patient, aged 43, in Glasgow, who pushed a wire 4" by 3/16" with suicidal intent through a point 1 3/4 inches below and 1 inch internal to the left nipple upwards and inwards. After removal, aside from some subcutaneous emphysema, a pneumothorax of short duration, and a week's febrile reaction, he recovered and was normal afterwards.

This case is presented because it adds to the records another case of successful recovery with retention in the heart of a large foreign body, a laundry needle, after failure in an attempt at its removal.

Report of a Case

Mr. O. E. was admitted to the King's Park State Hospital on August 16, 1932. He was then 59 years of age, a German-American, occupation, bookkeeper. His diagnosis was involutional melancholia.

Previous History: He was committed to the hospital following two suicidal attempts, apparently from despondency, being unable to obtain employment and without money. Shortly after his admission he brightened up considerably, took an interest in his surroundings, although at intervals he was inclined to be depressed and com-



Fig. 2. Lateral view, April 26, 1934

plained of a whispering voice. Because he showed considerable improvement and did not evince any suicidal tendencies, he was placed in the laundry of the hospital to work.

Present Illness: On April 26, 1934, at about 1:30 P.M. the patient made an attempt at suicide by thrusting a needle into his heart. The needle was described as being three inches long and about one-eighth inch in diameter, used to mend large canvas laundry bags. When discovered he was in moderate shock, pale, skin clammy, and pulse slow and feeble, rate 60, respirations 18 per minute. He did not complain of pain in or over the heart but wanted to be left alone to die.

Physical Examination April 26, 4.00 P.M. Pulse 60, temp. 98.8, resp. 18. The patient, an adult German-American of middle age, was apparently in previous good health. His weight was 172 lbs. The skin was cold and clammy, the pulse 60 in rate and feeble. Respirations were slow, 18 per minute. There was no cyanosis but marked pallor. There was no evidence of peripheral vessel arteriosclerosis. The chest was normal in size and outline, and the breath sounds were everywhere normal. The heart was not enlarged to percussion; the apex beat was feebly palpable in the fifth left inter-space 9 cm. from the midsternal line. The heart sounds were faint but normal, not muffled and no adventitious sounds could be heard. Bloodpressure at time of operation was not taken. Urine was negative.

Special Condition: There was a puncture wound about 3 mm. in diameter over the center of the last segment of the manubrium sterni just above the xiphoid process. No foreign body could be felt beneath this wound. There was no fresh oozing of blood externally.

Preoperative X-Ray: Roentgenogram of the chest on the day of operation taken one hour before operation showed a large needle within the pericardium and imbedded in the heart (Figures 1 and 2). As will be noted in the accompanying x-ray, the head of the needle lies close to the sternum. There is no apparent hemopericardium present.

Operation April 26, 4:30 P.M.: As the eye of the needle seemed by x-ray to be easily accessible, there was danger of the wound entrance in heart becoming enlarged from constant motion of the needle, and as the patient's condition was grave it was decided to attempt to remove it at once.

Under light ether anesthesia a transverse incision from midsternum outwards over the left fifth costal cartilage for a distance of 3" was made. The mesial $1\frac{1}{2}$ " of this

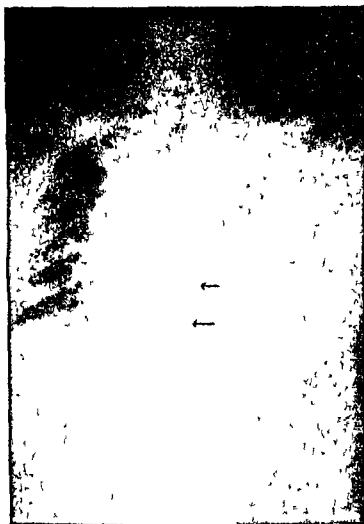


Fig. 3 View on third postoperative day, showing position of needle and development of pleural effusion

cartilage was divided by a costotome and disarticulated from the sternal junction. The left internal mammary artery was ligated. The pericardial sac was opened for a distance of $\frac{3}{4}$ " transversely through the opening. The pericardial cavity and the accessible ventricular area was thoroughly explored digitally but no needle could be felt. It was inferred that the ventricular contractions had carried it well into the ventricular muscle. The patient's condition did not warrant an incision into the heart muscle, particularly when the eye of the needle could not be felt or the wound of entrance into the right ventricle identified. There was a fairly profuse flow of blood from near the apex of the heart. The left pleural cavity was inadvertently opened. The increased respiratory movements resulting made it impossible to close the pericardial opening. As fresh blood was still escaping from the ventricular opening, the lower anterior portion of the pericardial sac was packed with one-inch iodoform gauze. The wound was closed with the end of the gauze for a drain, using No 2 chronic catgut between the pectoral muscle and perichondrium of the sixth costal cartilage, silk-wormgut reten-

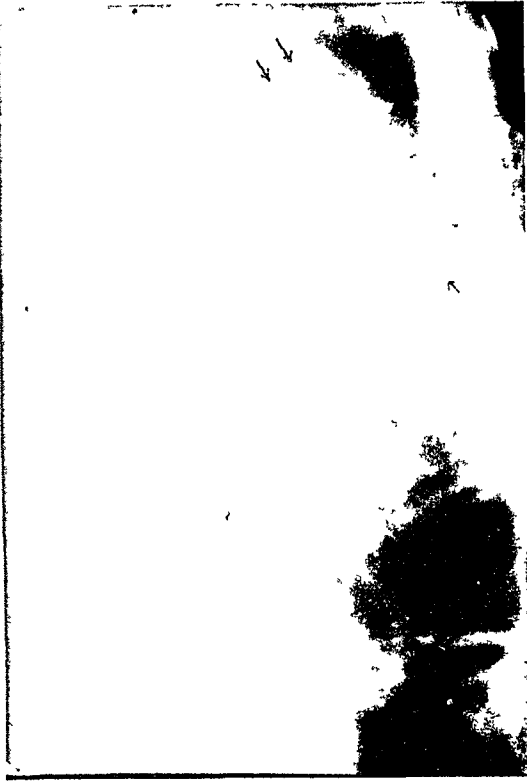


Fig. 4. Lateral view of chest with 2-second exposure, showing excursion of tip of needle during heart beats. Taken on 25th postoperative day.

tion sutures through the same, and silk for the skin.

Postoperative Course: The patient recovered quickly from the shocked condition but ran a persistent temperature 99.4 to 102° following removal of the packing on the first postoperative day, with drainage of pus from the pericardotomy wound from the fourth postoperative day.

The x-ray (Figure 3) on April 29 showed an extensive left sided pleural effusion. Aspiration of May 15 showed thick pus with a growth of staphylococcus aureus on culture. On May 16 a thoracotomy under local anesthesia was done, removing a part of the ninth left rib posteriorly. This empyema slowly improved but cessation of drainage has now ceased, his temperature having been normal for the past month.

Present Condition: At no time postoperatively did the patient complain of cardiac pain. The pericardotomy wound is now completely closed and epithelialized. The heart is moderately enlarged to the left, measurements of the area of cardiac dullness being normal for the right border and on the left being 2.0, 6.5, 10.0, and 11.0 cm. in the second to fifth interspaces,

respectively. He has no dyspnea or cyanosis on being up and around. The heart sounds are normal and no pericardial friction rub can be heard. The left lung is apparently normally expanded and the breath sounds clear. His weight after dropping to 131½ lbs. on May 14 is now 151 lbs. His pulse is 68 to 70 at rest and 88 to 90 seated. His temperature and respirations are normal.

Position of Needle by X-Ray: Comparing x-ray appearance in Figure 4 with that in Figure 5 it will be seen that the needle has not moved up in two months' time from the postoperative situation. Figures 4 and 5 show the head of the needle intramuscularly having moved inward from the position in Figure 2 where it seemed in the pericardial sac. To consider the pulse rate of 90 in the picture in Figure 4 it is seen that the head of the needle is fixed apparently by adhesions at the apex, and the shaft and point move in and out with each systole of the right ventricle; this being a 2 sec exposure by a portable x-ray, the movement is shown through approximately



Fig. 5. Lateral view on 96th postoperative day, with one-tenth second exposure, showing relatively same position as in Figure 4, 71 days previously.

three systolic contractions. Figure 5 shows a lateral view of the thorax with a much better view of the needle by a stationary x-ray with 1/10 sec. exposure. At no time have we been able to see the needle by fluoroscopic examination with stationary x-ray machine of the usual penetration for hospital use. Yet Villéon¹⁰ has devised a technic for removal of foreign bodies under fluoroscopic control.

Conjecture as to Ultimate Fate of the Needle. Bland-Sutton¹¹ in 1919 cited a number of war cases of bullet wounds with missiles retained and classifies the possible outcome as follows:

A bullet loose in the cavity of the heart is swirled in the blood current. Some have been watched fluoroscopically and may have an elliptical movement with a definite axis. They may be expelled into the bloodstream at any time with symptoms of embolism.

(a) A bullet in the right ventricle may be ejected and produce fatal pulmonary embolism. Such a case has been known to survive 12 days and is recorded by H. J. Fry¹¹ at the War Office Collection, London.

(b) A bullet in the left ventricle may be driven into a systemic artery and produce ischemia. Schloffer¹² in 1903 reported a case of lodgement in the axillary artery with later removal and recovery. Cases of lodgement in the common iliac artery are reported by O'Neill¹³ and Bland-Sutton.¹¹

Fischer¹ in 1868 compiled a large number of instances of healed wounds of the heart containing foreign bodies carried about for years without apparent disability. Turner¹⁴ in 1881 reported a case of a soldier who died of other causes with a bullet imbedded in his heart from a wound 6 years before. On the other hand, Viller¹⁵ in discussing the indications for the removal of foreign bodies cites a case of Professor Tillaux where an iron rod 16 cm. long, left in the heart, caused death a year later by penetrating the posterior wall of the ventricles and penetrating the right lung.

Now in the case which the author has described it would seem that the patient has a reasonable chance of no further trouble. Comparison of plates in Figures 4 and 5 shows no further migration of the needle that is apparent. Any erosion

by the point of the needle as described by Loisson² here would seem to be harmless, except possibly to produce some injury to the endocardium of the tricuspid valve or intraventricular septum.

Procedure in Similar Cases

There seems no doubt that in this case attempted removal immediately upon discovery was the procedure of choice. Unfortunately some 2½ hours elapsed before this case was discovered, x-rayed, and the author summoned to attend. During this interval the needle had been in the process of retraction into the heart by the systolic contractions. When first seen by a hospital physician it was not palpable beneath the skin. In the interval between his x-ray and surgical intervention (about one hour) it had been further retracted so that it could not be reached without an incision into the ventricular muscle.

Many surgeons are of the opinion that with stab wounds by long slender objects remaining "*in situ*" they should be withdrawn at once (see Rehn;¹⁶ Terrier and Raymond¹⁷) after careful exposure of the wound, and the patient afterwards carefully observed for signs of "heart tamponade." In Loisson's² 23 reported cases there were 14 deaths following surgical treatment, none of which, however, was due to infection.

The best policy as to treatment and grouping of such cases in the literature, in such emergencies seems to be that of Delorme¹⁸:

(1) Where grave manifestations are present, cases with cardiac pain, suffocating crises, cardiac irregularity and palpitation, whether intracavitary or intramuscular, all require operation at once.

(2) Where the symptoms are less alarming and tolerable and there is definite hope that the missile may become fixed and encysted, there is every reason to wait even though there is danger of transportation to another area where its lodgement may cause untoward and dangerous sequelae.

(3) In those cases where the symptoms are negligible but in which the missile lies free in the chamber of the heart the danger from migration or irritation (especially if the foreign body is rough) is too obvious. Removal here seems to be the

proper course. In the left ventricle, however, if it were smooth Delorme would not intervene until it had lodged in another cavity; if rough (e.g., a fragment of iron), he would explore for it.

Summary

(1) The first reported cases of recovery with a retained needle in the heart are those by Gerard, 1834; Foy, 1887; Macdougall, 1895; Stelzner, 1887.

(2) The first reported cases of successful removal of a needle from the heart are those of O'Connor, 1835; Callender, 1873; Foot, 1888; Turner, 1896; and Prior, 1897.

(3) A case is added to the literature by the author. It concerns a man, 60, patient in a mental hospital, who forced

a large-size needle into the wall of the right ventricle of his heart. Operation within three hours of the act found the needle inaccessible, in the heart muscle, due to retraction by systolic contractions. Although recovery was complicated by suppurative pericarditis and empyema, the patient is alive and well at seven months with the needle still in the right ventricle without apparent embarrassment.

(4) The fate of foreign bodies in the heart is discussed as well as conjectures as to the probable outcome in this case.

(5) The need for prompt attempt at removal in similar cases is emphasized.

(6) The generally accepted grouping of cases with policy as to treatment as advised by Delorme is given.

References

1. Fischer: *Arch. f. Klin. Chirurg.*, 1868—T. ix P. 571.
2. Loisson: *Rev. de Chirurgie* 19: 1899.
3. Foy: *Dublin Jl. of Med. Science* 85: 1887.
4. Macdougall: *Edin. Med. Jl.* 51: 1895.
5. Stelzner: *16th German Congress of Surgery*, vol. 25.
6. O'Connor, L.: *London Medical Gazette*, 1835.
7. Callender: *Med. Chir. Trans. London*, p. 56, 1873.
8. Foot: *Dublin Med. Jl.* 85: 365, 1888.
9. Turner, Wm.: *Br. M. Jl.* 2: 140, 1896.
10. Prior: *Lancet* Oct.: 913, 1897.
11. Bland-Sutton: *Lancet* May: 773, 1919.
12. Schoffer *Beit. Z. klin. Chirurg.* 36: 698, 1903.
13. O'Neill: *Br. M. Jl.* 2: 719, 1917.
14. Turner: *Lancet* Oct. 8, 1881.
15. Viller, M. F.: *xv^e Congrès français de chirurgie*, 1902.
16. Rehn, L.: *Arch. f. klin. Chirurg.* 55: 315, 1897; 83: 723, 1907. *Verhandlung d. deutsch. Gesellschaft. f. Chirurg* 26: 56: 1897.
17. Terrier, F., and Reymond, E.: *Presse Méd.* 2: 1011, 1902. *xv^e Congrès français de Chirurgie*, 1902.
18. Delorme, E.: *Bull. Acad. de méd.* 78: 243, 1917.
19. Villéon, Petit de la: *Bull. et mém., Soc. de chir.—Paris* 45: 844, 1919.

ANOTHER MEDICAL HERO

If "peace hath her victories no less renowned than war," she hath her heroes as well. Another in the illustrious list risked his life for science in November last. We are told in the December, 1934, *Archives of Internal Medicine* the personal and physical reactions of A. W. Blair, M.D., of University, Alabama, who deliberately arranged to be bitten by a female spider *Lactrodectus mactans*.

At 10:45 A. M. he sustained the bite; at 11:18 A.M., pain extending up arm and chest; 11:55 A.M., definite epigastric pains; 12:00 noon, fall in blood pressure and weak pulse; 12:45 P.M., agonizing pain in abdomen, back and legs, taken to the hospital; 1:00 P.M., in profound shock, pulse uncountable; 1:15 P.M., in excruciating pain, pulse 150, labored respirations.

November 13: An evening and night of extreme suffering in spite of morphin, face swollen, eyes red, watery, albumen in urine.

4:00 P.M., pain, flushed, swollen face, tongue coated, fetid breath, nauseated, tense abdomen.

November 14: Restless night—rheumatoid pains in leg, sweating, and weakness, abdomen tense.

November 15: Home in ambulance.

November 20: All symptoms cleared up.

These few extracts, remarks *California and Western Medicine*, impart but a meager picture of what occurred in this eight-day period recorded in five printed pages of clinical notes. They do, however, add one more name to the roll of heroes for science.

"Do you guarantee results in your nerve treatment?" asked the prospective patient.

"I do," replied the specialist. "Why a man came to me for nerve treatment, and when I had finished with him he tried to borrow \$50."—*Colorado Medicine*.

County Societies

Bronx County

The Bronx won out over Queens in the anti-diphtheria immunization contest which closed February 9, according to Dr. John L. Rice, Commissioner of Health. The Bronx had 344 more immunizations of children under the age of six years than had Queens, and as a result, the Bronx County Medical Society is to be presented with a silver trophy by the Chamber of Commerce of the Borough of Queens.

In a similar contest conducted by the Department of Health in the Bronx and Queens in 1933, Queens had the lead over the Bronx by a margin of seven immunizations. At that time the Medical Society of Queens County was presented with a cup by the Bronx Chamber of Commerce. While the campaign ran for 17 weeks, the Christmas vacation really took out two weeks, making the running time 15 weeks. In that time 11,062 children under six years of age were immunized in the two boroughs, 5,703 in the Bronx, and 5,359 in Queens.

During the entire campaign 17,980 children of all ages were immunized in the two boroughs; 9,535 in the Bronx and 8,445 in Queens. This was an average of approximately 1,200 for the two boroughs each week—636 for the Bronx and 563 for Queens. For the entire year of 1934 immunizations in the Bronx averaged 346 a week, as against 212 in 1933, and Queens averaged 316, as against 182 the year before. The difference between the weekly average and the average of immunizations during the campaign for both boroughs was an increase of 538 for both boroughs, a gain of more than 54 per cent.

The outstanding and gratifying feature of the campaign was the fact that the majority of the children immunized, 11,062 were under six. This means 62 per cent, one of the highest marks reached for preschool children in any previous campaign in those boroughs.

Delaware County

An earnest discussion of bills at Albany affecting the medical profession was a feature of the quarterly meeting of the Delaware County Medical Society on March 19, reports the secretary, Dr. William M. Thomson, of Delhi. He adds that "the Society has been very prompt and energetic in corresponding with our Senator and Assemblyman from this District, and I am happy to report that they have been very

co-operative with us." Dr. Carl Schumann, of Delhi, was unanimously elected to membership.

Erie County

The Buffalo ERB board has under consideration the plan of the Medical Society of the County of Erie to provide medical care for welfare through their family physicians, Dr. John L. Hoffman of Kenmore, chairman of the Society's committee on economics, reported at the society's March meeting.

Dr. Hoffman declared it to be the opinion of his committee that there are "a large number of persons who do not want the impersonal services of the clinics." Under the Society's plan, physicians would be reimbursed by the Department of Social Welfare at the rate of \$2 a house call, \$1 an office call, and \$25 for an obstetrical case, the rates being paid in Erie County.

The city officials of Buffalo have been sharply called to account by the State Department of Health for polluting the Niagara River with sewage. "The discharge of untreated sewage by the city of Buffalo," declares the Health Commissioner, has caused a "serious and dangerous menace to health." The cities imperiled are Tonawanda, North Tonawanda, Niagara Falls, Lockport, Lewiston, Youngstown, and Fort Niagara which derive their public water supplies from the Niagara River. An epidemic of thousands of cases of diarrhea at Niagara Falls was attributed to this cause, and the menace is said to extend even to towns on Lake Ontario and along the St. Lawrence River.

Kings County

An old-time German street band started the festivities on the evening of March 14 at the Hotel Granada in Brooklyn when more than 150 physicians, lawyers, clergy, nurses, patients, and other friends gathered at a dinner in honor of Dr. George H. Reichers, chief surgeon at the Bushwick Hospital, who has just completed 22 years of service there. The band marched into the banquet hall blaring lustily and lingered to render choruses in which all the diners joined. Later a song, the words of which were composed especially for Dr. Reichers, was rendered by the diners to the air of "The Man on the Flying Trapeze," to the obvious delight of the guest of honor. The speeches were a mixture of serious tributes

and humorous badinage. A shout of laughter greeted Rev. Dr. Genns when he said he had lived 30 years next door to Dr. Reichers and still loved him.

Concerned over what it describes as "the lost art of prescription writing," the Medical Society of the County of Kings announces a course on the subject for its members at the Brooklyn College of Pharmacy. Four lectures will be given by Dr. Frederick Schroeder.

Dr. Alec N. Thomson, director of medical activities, said the society had become alarmed at the increasing tendency of physicians to prescribe patent medicines. The result, he added, had been that druggists had suffered and physicians had come to rely too much on the products of pharmaceutical manufacturers.

The need for a course on prescription writing was presented recently to the society in a report by Dr. Thomas F. Nevins, chairman of a committee considering pharmacy and dispensing practice.

"The pharmacist," he said, "in many instances now being forced to become a soda-water dispenser and restaurant keeper, has a grievance with our profession which is just and cannot be ignored. The lost art of prescription writing, and the ease with which 'patents' are provided for us by the pharmaceutical manufacturers, have led many of us to prescribe these frequently and thoughtlessly without regard to what it would do to the pharmacist and to ourselves.

"It has forced the pharmacist to stock his shelves with all sorts of products many of which move rarely, if at all. It has taught the public the noble art of self-medication. We must admit that we have played a very active part in popularizing this art to our own undoing."

Dr. Nevins contended that the proper prescribing of numerous useful drugs would overcome the tendency toward self-dispensing and would restore the pharmacist to his proper place in medical life.

It is expected that several hundred physicians will attend the lectures.

Livingston County

Buildings of the new State Tuberculosis Hospital at Mount Morris will probably be turned over to the State about the middle of April, according to the State Health Department's current bulletin. In charge of the institution will be Dr. N. Stanley Lincoln, formerly clinic physician in the Department's Division of Tuberculosis, who has been transferred from the superintendency of the Herman M. Biggs Memorial Hospital

in Ithaca to the corresponding post in the Mount Morris Hospital.

Monroe County

All the valuable advice is not given by famous medical men in their set speeches. For instance, when Dr. Alfred W. Adson, chief neurologic surgeon of the Mayo Clinic at Rochester, Minn., visited the Rochester (N. Y.) Academy of Medicine in March to speak on his specialty, he told a newspaper photographer that fat men shouldn't sit down to have their pictures taken.

"Sit a fat man on anything soft," he explained, "and his body immediately pushes as much fat as possible up to his chin."

A hard chair was promptly secured for the picture.

More than 200 pupils of the Fairport schools have received the tuberculin test, which was given to all students who have lost weight during the past year, and whose parents gave their consent.

Dr. George Price, health officer and medical inspector of Fairport schools and chairman of the communicable disease subcommittee of the Monroe County Medical Society, was in charge of the testing.

An annual joint meeting of the Rochester and Syracuse Academies of Medicine is being considered. If the idea has sufficient approval, a meeting will probably be arranged for late Spring or early Fall. Rochester has been invited to go to Syracuse for the first meeting, the Rochester Academy to furnish the speaker.

Nassau County

The growing number of free clinics, over which medical men have no control, are becoming a menace to the best interests of both doctor and patient in Nassau County, and the profession feels that the best service can be given through clinics maintained by the doctors or by "public health hours" at each doctor's office. The County Medical Society has found that in many of the free clinics there is no attempt to determine the financial status of an individual applying for free service; that many could pay nominal fees to the family doctor, or a partial fee, and, if destitute, could be carried by the doctors as a confidential charity case. An additional thought expressed by the committee was that in some cases actually paying patients of doctors are taken away from them and referred to free clinics. Only those types of cases should be referred to a public clinic which no doctor

wants or which no one doctor is equipped to handle the committee maintained.

The committee urged at a meeting of the County Society on February 26 that public health clinics be condemned because they are unwarranted, because the doctors have drawn up a program for their operations in hospitals and because the doctors are ready and willing and have agreed to perform all services demanded of a clinic in their own offices.

The committee recommended that any doctor servicing a disapproved public clinic be considered as a violator of the ethics provisions of the American Medical Association. This in effect would exclude a doctor from good standing in any medical society in the entire nation.

Under the plan adopted by the society those desiring clinical attention will call at the office of their family or neighborhood doctor. If the patient is able to pay he will be charged the usual fee and if further clinical attention is required, will be referred to a properly supervised clinic by the doctor.

If the patient is unable to pay the full fee arrangements have been made for the payment of a partial fee. If the patient is unable to pay any fee such as a welfare case, he or she will be given the same attention as the paying patient and the doctor will either accept the case as his own charity case or secure a medical relief authorization.

The resolution adopted by the Society released in full by Dr L. H. Bauer of Hempstead, chairman of the medical economics committee follows: "Resolved, that the Medical Society of the County of Nassau, having outlined a proper and inclusive procedure for the handling of indigent cases in this county, disapproves of any of its members taking part in any clinic not specifically recommended by this society and that it will consider any member who violates this resolution as not acting in accordance with the tenets of the ten point program laid down by the American Medical Association at the 1934 session of its house of delegates and by the council of the New York State Medical Society on December 13, 1934. The report is unanimously approved by the medical economics committee. (Signed) Dr Louis H. Bauer, Dr Julian Dean, Dr E. K. Horton, Dr W. F. Lewis and Dr P. A. Williams."

This resolution was adopted unanimously by the Society. Dr George A. Newton of Freeport, president, announced that the members of the Society are prepared to assume the responsibilities laid down in the resolution at once.

It is believed that the action of the Society sounds the death knell of public health clinics of all varieties which are conducted by laymen without medical direction or supervision in Nassau County. In other States and Counties in the Midwest where similar procedure has been taken "free" clinics have been wiped out of existence.

New York County

Telling shots for and against socialized medicine were fired by some of the heavy artillery of the State and County Medical Societies at the New York Academy of Medicine on March 28. That socialized medicine is the next logical step in our national program goes without saying," declared Dr Morris Rosenthal, Director of the Bureau of Compensation Insurance of the County Society, and he added roundly that "if the medical profession is opposed to state medicine there is very little it can do about it," and "the profession will have to take the part assigned to it with as good a grace as may be when it is offered."

On the other side, Dr Frederic E. Sondern, President elect of the State Society, remarked that if experience proved that compulsory sickness insurance meant adequate medical care for all the people, then the physicians "would be the loudest advocates of that system" but they oppose it "because regimentation and by control of professional services are known to be fatal to progress and inevitably lower the quality of the service." Sickness among the workers of England and Germany, instead of lessening or even standing still "has almost doubled in England in the 24 years and trebled in Germany in the 50 years under this system of medical care." Dr Haven Emerson of Columbia, too, agreed that there is nothing to show that the new plans suggested "would improve the quality or increase the quantity of medical care beyond present performance."

Why socialized medicine fails was pointed out by Dr Samuel J. Kopetzky, Speaker of the House of Delegates of the State Society. In Europe under this system "the doctor is so poorly paid that he must see about 50 patients a day to earn the most modest livelihood." He makes hasty diagnoses and hands out stock prescriptions and in time becomes incapable of accurate diagnosis and correct treatment. In fact the poor here get far better medical care than the beneficiaries of socialized medicine in Europe. "The human body is not a motor-car—and large scale industrial methods will not heal its ills."

First steps toward putting into actual

operation the long-discussed plan of group hospitalization insurance for earners of wages and small salaries, assuring them of hospital care in the event of illness in return for a premium of 90 cents monthly, are announced by David H. McAlpin Pyle, president of the United Hospital Fund.

The plan is being installed by the Associated Hospital Service of New York, a non-profit corporation, which has sent invitations to 140 hospitals in the metropolitan area to join the project. The hospitals are now acting on these invitations and soon, according to Mr. Pyle, the hospital service group will begin solicitation of annual memberships in the insurance plan among employed groups.

Under the plan, employees would authorize their employers to deduct 90 cents a month, or \$10 a year, from their pay. This would constitute their full subscription for one year.

Each such subscriber, Mr. Pyle explained, would be entitled to three weeks of semi-private hospital care during the contract year without further charge.

To gain admission to a hospital, the subscriber need only obtain the recommendation of his personal physician. In the hospital, the patient would be subject to regular rules and must make his own arrangements for medical or surgical services, fees for which are not included under the group plan.

Karl Eilers, president of Lenox Hill Hospital, is president of the Associated Hospital Service, which has been chartered by the State Departments of Insurance and Social Welfare. Vice-presidents are Stanley Resor, vice-president of the Manhattan Eye, Ear and Throat Hospital, and Dr. Walter T. Dannreuther, former president of the New York County Medical Society and representative of the co-ordinating council of the five County medical societies in the City.

Oneida County

Dr. C. H. Baldwin was elected president of the Utica Medical Club at the annual meeting. Others elected were: vice-president, Dr. Frederick R. Ford; secretary-treasurer (re-elected for sixth term); Dr. Daniel E. Pugh; trustees, Dr. Clarence Russell, and these re-elections, Dr. R. O. Lees, Dr. John Rossi, Dr. P. L. Turner and Dr. H. H. Shaw. The fortieth annual outing will be held in May.

Onondaga County

Dr. Frank W. Marlow was guest of honor recently at a dinner in the Onondaga Hotel given by colleagues in the eye depart-

ment of Syracuse University College of Medicine in observance of his 50 years of service to the college and the community. Dr. Marlow is professor emeritus of ophthalmology.

Queens County

Plans for six medical courses, arranged by the Committee on Graduate Education of the Queens Medical Society, are announced by Edward C. Veprovsky, committee chairman. The courses are to be given in the various hospitals of the County and are open to general practitioners and specialists. There is a small fee for each course except the one on "Early Diagnosis of Pulmonary Tuberculosis," which is financed by the Queensboro Tuberculosis and Health Association, and will be given free. Dr. Edward McSweeney will direct the course.

Drs. George J. Lawrence, Frederick Carpenter, and Samuel L. Mitchell will give a course in clinical obstetrics at Flushing Hospital.

Drs. Luvia M. Willard and Henry A. Reisman will give a course in pediatrics at Jamaica Hospital, and Drs. James Reuling and James Dobbins will lecture on contagious diseases in children at Queensboro Hospital.

Dr. Irving W. Ponemon will give a course in x-ray diagnosis at Mary Immaculate Hospital, Jamaica, and Dr. Rudolph Boenke will teach the course in skin diseases at St. John's Hospital, Long Island City.

Crowns naturally go to Queens, and this borough appropriately wears the diadem for the lowest death rate of any place in the United States last year: 6.5 per 1,000 of estimated population.

The most threatening rival for the health crown is Detroit, claiming a next-best death rate of 7.3 per 1,000.

Other pretenders to the throne (86 large cities in the U. S.) claim an average rate of 11.4 per 1,000. Long live the Queens!

Tioga County

Dr. I. N. Peterson, of Owego, secretary-treasurer of the Tioga County Medical Society, was elected president of the Tioga County General Hospital staff to succeed Dr. W. A. Moulton, of Candor, at the annual meeting of the staff. Dr. Leon S. Betowski, of Waverly, was re-elected vice-president and Dr. John B. Schamel, of Waverly, was named secretary-treasurer.

The rotating staff for handling County welfare cases, which was started last year by Dr. Moulton, was approved by the members for continuance.

Medicolegal

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A Salutory Decision

The Education Law of the State of New York which provides for the regulation of the practice of medicine also contains an article regulating the practice of optometry. This article restricts the practice of optometry to persons holding a certificate of graduation in optometry. Persons now desiring to practice optometry under the provisions of the law must in order to obtain such a certificate complete a high school education and graduate from a school of optometry approved by the Board of Regents, and in addition must successfully pass the State Board examination and must meet certain requirements set up by the Board of Regents as to character and fitness.

The practice of optometry is defined by the Education Law as follows:

A person practices optometry within the meaning of this article who by any means or methods, other than by the use of drugs, diagnoses any optical deficiency or deformity, visual or muscular anomaly of the human eye, or prescribes lenses, prisms, or ocular exercises for the correction or relief of the same, or who holds himself out as being able so to do.

Recently a decision was handed down by one of the Justices of the Supreme Court of this State in a case* in which the question as to whether a corporation may practice optometry was ruled upon.

An application was made to the Secretary of State offering for filing a certificate incorporating a company, in which certificate the following was included among the proposed purposes of incorporation:

To carry on the general business of opticians and dealers in optical goods, lenses and glasses of every description. To manufacture, grind, prepare, buy, sell, import, export, distribute and deal in eye glasses, spectacles, lenses, opera and field glasses, magnifying glasses, mathematical and scientific instruments, cameras, photographic supplies, thermometers, and any and all materials and accessories used in connection with or pertaining to the same or in the manufacture thereof, and appliances, devices, articles, and materials used by oculists, opticians, physicians, surgeons, and scientists. To transact and carry on the optical business; to do, render, and perform *optometrical* and *oculists'* work and services and to engage in the practice of

optometry, provided it employs only licensed optometrists to do the work. To grind, polish, cut, fit, and shape glasses for all purposes.

The Secretary of State rejected the application and returned the proposed certificate of incorporation on the ground that a corporation may not lawfully be organized for the purpose of performing optometrical and oculists' work and services and to engage in the practice of optometry even though it should be specifically provided that the work should be done only by licensed optometrists.

A proceeding was instituted in the Supreme Court for the purpose of obtaining an order of mandamus directing the Secretary of State to accept for filing the proposed certificate of incorporation. The court denied the application and rendered an opinion sustaining the action taken by the Secretary of State.

In the course of the opinion the court noted the fact that while the Education Law contains a definition of the term optometrist, there is no statutory definition of the term oculist or optician. In the absence of such statutory definition the court stated its own definitions as follows:

It would seem that an oculist, whose technically correct title is that of an ophthalmologist, is a physician specializing in the diagnosis and treatment of diseases of the eye. He, as well, examines eyes for the purpose of determining whether glasses are needed, prescribes lenses, when necessary for the correction of vision, and in the practice of his profession, is often called upon to perform surgical operations on the eyes.

An optician is not a licensed practitioner, but is one who makes eye glasses and lenses and fills prescriptions of the oculist or optometrist, much in the same manner as the druggist carries out the direction or prescription of the physician.

The court in determining the application, pointed out the law has been well settled that a corporation may not be organized for the purpose of practicing either law, medicine, or dentistry, and determined that since by statute optometry is given a place with the other professions whereby its practice is regulated for the purpose of protecting the public from unscrupulousness, ignorance, unskillfulness, deception and fraud, the same rule should follow. In its opinion the court stated as follows:

* Matter of Stern, Supreme Court, Albany County, Special Term.

If it is repugnant to the policy of the state to have the profession of medicine, of dentistry and of the law practiced by a corporation, it would seem to be quite as repugnant to have the profession of optometry practiced by a corporation. The rule laid down in *Matter of Co-operative Law Company* (which dealt with the practice of law by a corporation), 198 N. Y. 479, is as applicable to the practice of optometry as to the practice of the law. The practice of optometry may be carried on only by those persons who have complied with the statute and have met the required qualifications as to moral character and educational fitness. It necessarily follows that the right to practice optometry is a personal one and confined to real persons and not to legal entities. A corporation as such cannot meet the requirements of the statute; it cannot have completed a course in a high school or in a university where optometry is taught, nor present the necessary certificate of character. It cannot pass a state board examination or present a degree earned in a university. . . .

As I see it, optometry, like the law, "is not a business open to all, but a personal right, limited to a few persons of good moral character, with special qualifications ascertained and certified after a long course of study both general and professional, and a thorough examination by a state board appointed for the purpose." The relationship between an optometrist and his patient is of a personal and confidential nature, not unlike the relationship between an attorney and client, or physician and patient. The examination of an optometrist may not only indicate an eye condition, but may disclose other ailments and bodily afflictions of a more or less personal nature. True, the optometrist may not lawfully treat his patient for these ailments, but his patient is entitled to the assurance that the knowledge obtained in such examination shall be held inviolate and not become a record in the files of a business corporation. The practice of law by a corporation in this state is prohibited by statute, but quite apart from the statute, it is and was before the enactment of the statute against the public policy of this state.

This is a salutary decision. Once again the courts of this State have put their stamp of disapproval upon attempts by corporations to engage in activities which are against public policy and contrary to the spirit of the statutes of this State, and in conflict with the adjudicated cases of our highest courts.

Dr. Harry Plotz, Brooklyn medical man who when only an interne at Mt. Sinai Hospital discovered the bacillus of typhus, has received a new honor from France, where he has lived and worked for the past 15 years.

Already a Chevalier of the Legion of Honor, he has been promoted to the rank of

Claimed Negligent Diagnosis and Treatment of Fractured Shoulder

A physician was consulted by a patient with reference to a general physical examination for a report to a society which supplied a sick benefit to its members. The doctor examined him and found him in good condition and forwarded his report to the society. A few weeks later the patient returned and stated that he had fallen down a flight of stairs and claimed to have pains in his back and the doctor examined him but could find no injury whatsoever. A few days later he was called to the patient's home and patient was in bed with a compress on his head and still complained of a pain in his shoulder, and the patient pleaded with the doctor to make out a sick certificate in order to receive the benefit from the society.

Finally the patient insisted that the doctor make out a certificate stating that there was a contusion of the shoulder, which was the fact. Doctor was called again about a week later to the patient's home and the patient again wanted a further certificate stating further injuries. This the doctor refused to make out, explaining that he had no injuries whatsoever outside of the contusion, which had cleared up. The patient became angry and discharged the doctor. Doctor heard nothing further for awhile until he found out that patient had gone to a hospital and had been there approximately for a week and had had x-rays taken. The doctor went to the hospital and examined the x-rays and records, which verified the doctor's find, to wit, the patient had suffered no injuries whatsoever.

A few weeks later doctor was served with a summons and complaint alleging among other things that the patient was suffering from a fractured shoulder which the doctor had failed to reduce or cure, and as a result of it he had become so crippled that he was unable to attend to his business. About a year after the suit was started, no steps having been taken by the patient to press the case for trial, a motion was made on behalf of the doctor to dismiss the suit for lack of prosecution. This duly came on in court and the patient's attorneys failed to appear and the case was dismissed.

Officer, according to an announcement at the French Ministry of Foreign Affairs.

Dr. Plotz, who formerly lived at 159 Halsey Street, and who went through Boys High School before going to Columbia, is only 45 now. At 24 years he made his typhus discovery in 1914, and in 1915 he announced discovery of an anti-typhus serum.

Across the Desk

The celebrated "Detroit Plan" of medical care has completed its first year, and the official Detroit *Medical News* reports that "the most important man—the patient—believes in and is satisfied with this set-up," and the "allied professions" of doctors, specialists, dentists, nurses, pharmacists, believe in it, but "the paid sociologist remains critical and dissatisfied." The Bureau handled 1,739 patients during the year, with total fees of \$142,349.50, of which \$45,743.16 has been collected. More is coming in all the time, for under this plan the patient has the doctor of his own choice and the Bureau makes out a plan or budget by which the worker can pay his account out of future earnings. It is heartening to read that "the daily evidence of gratitude from patients served is the stimulus to the Board of Arbitration and the Officers of the Wayne County Medical Society to go ahead with the plan and further the service of the Bureau."

A weary medical editor in the Middle West remarks that "sometimes when we are tired and we listen to papers, the main thought we carry away is that we have heard a vocabulary on parade."

People who think the medical profession is overcrowded may be interested to know that the Maine State Bureau of Health is advertising for doctors to take up country practice. The opportunities "are all for young men who are willing to work and willing to answer night calls. No subsidies are provided," the young M.D.'s are warned, for the reason that "all of the opportunities are good enough without a subsidy."

Talk is heard from time to time that too many hospitals have been built. Well, a nationwide survey made by Alden B. Mills, managing editor of *The Modern Hospital*, reveals that no less than 31,000,000 of our people and 29,000 physicians live in areas seriously deficient in hospital and health services. The States of the South are the ones chiefly lacking proper hospital facilities, according to this survey.

Two swindlers are looking out at the world from behind prison bars in New York City for obtaining \$500 from one premedical student and \$900 from another by promising to secure their admission to medical schools. They were exposed through the activities of Prof. William MacTavish of New York

University. Unfortunately their sentences were only a few months and they will soon be out to resume the "racket."

"Chicle allergy" is brought to our notice by Dr. A. I. Kleinman, of Brooklyn, who reports in the *J.A.M.A.* two cases where sneezing, coughing, and nasal and asthmatic symptoms were traced to chicle, the base of chewing gum.

Two investigators at Antioch College have found that when an expectant mother smokes heavily, the heart of her unborn child beats faster. Whether the child's health is affected unfavorably awaits further study, but the investigators remark that it is "not improbable."

The license of Dr. Clayton E. May, of Minneapolis, who treated the notorious bandit Dillinger while he was in hiding there, has been revoked by the Minnesota State Board of Medical Examiners. This action was taken, not because Dr. May attended Dillinger, who was entitled to medical treatment, but because the doctor conspired to conceal him and provided him with a refuge in order that he might escape arrest. In fact, the doctor was convicted and sentenced to the Leavenworth penitentiary last year on that charge.

The greatest peril to the medical profession today is "bunk" in the opinion of President W. J. Leach of the Indiana State Medical Association. There is the bunk of the "drugless healers, who crack the joints and stretch the imaginations of their victims, following an advance payment of the fee," then the bunk of the faith healers, and third, the bunk of the quack doctors and quack remedies, "an incalculable menace to the public and the medical profession alike." The medical men are to blame for meekly letting these "bunk vendors" mislead the public, says Dr. Leach, and he calls on the doctors to start a vigorous educational campaign of "anti-bunk."

American physicians have seen with a certain sense of wonder the names and pictures of French, German, and Austrian physicians paraded in large advertisements in our newspapers as endorsing various products. The products themselves may be perfectly unobjectionable, but the display of medical names and photographs in circus-

poster style makes our physicians emit a slight gasp. Now it seems that the matter has been taken up by the French Minister of Foreign Affairs and the society that has charge of foreign medical relations, and it is found, according to the *Presse Médicale*, of Paris, that "the photographs and accompanying, endorsements have been published without the consent or knowledge of the respective medical men." Suave interviewers, we are told, extracted statements from the eminent medical men which they twisted into endorsements of their particular foods or drugs. The photographs were bought from picture dealers. French doctors have been warned against this practice and future interviewers are likely to have a chilly reception.

The well-known feat of a plain country doctor named Dafoe is bringing out interesting remarks on what other country doctors have done. A writer in a Kansas medical journal remarks: "And by the way. If you have ever perched yourself on a wooden box with your feet on the cross-bar at the foot of a 'sanitary cot' to keep them out of water on the floor of a leaky shack, with one good lady neighbor holding a kerosene lamp while you repair a perineal laceration, and another neighbor lady holding an umbrella over the newly born heir (or heiress) to keep it at least meteorologically dry while the father nonchalantly pats the head of the family dog that is sleeping on a pile of burlap bags by the stove—we say if you have ever done this, then you have done country obstetrics."

Druggists who nullify the doctor's best efforts and finest skill by substituting inferior ingredients in compounding the prescriptions are getting what is due them. *American Medicine* tells us that one of them in the Bronx was recently given a fine of \$500 or 90 days in the workhouse for this shady trick. The fact that this sort of thing is going on should convince both doctor and patient that it is wise to trust only chemists of character and conscience to put up the medicines on which health and life depend.

The penalty was imposed by presiding Judge Thomas F. McAndrews, and the specific offense was the violation of the retail drug code by substituting another product

upon a prescription calling for Ergoapiol (Smith). The prosecution was conducted under the Shackno Act which makes it a state offense to violate the NRA. Concurring with Presiding Justice McAndrews were Associate Justice John V. Wood and Hyman Rayfiel. The prosecutor was Assistant District Attorney Lawrence Peltin.

Justice Rayfiel before sentence was pronounced severely condemned the practice of drug substitution as follows: "The fact, Counsellor, that he [Klausner] was never convicted before need not necessarily be cited as a certificate of good character. There were a number of complaints made against him before. Now, of course, the court always takes into consideration the man's family and all that. It is really a pitiful thing that people who are served by him also have families, and to substitute drugs in any form is a very dangerous proposition, as you very well understand. You are dealing with human safety and possibly human life. The idea of getting drugs that are stale or inefficient is liable to cause a great deal of harm, even beyond the help of a reputable physician. Those things are essential, very essential, Counsellor." The defense counsel pleaded: "He is not a chemist, if your honor please is not familiar . . ." and was answered by Justice Rayfiel: "I know, but he employed pharmacists with instructions to do what he told them, not to use their own judgment, but to do what he told them. The probation officer informs us there was one man who actually was discharged by him because he refused to do the things that he wanted him to do, is that right?"

Leprosy may be spread by apparently healthy persons, who do not yet show clinical symptoms of the disease, remarks *The Diplomat*, organ of the National Board of Medical Examiners. Evidence that this may be the case has just been reported to the U. S. Public Health Service by one of its officers, Dr. N. E. Wayson, director of the Leprosy Investigation Station at Honolulu.

Persons may be infected with the bacillus of leprosy and remain well for a long time, if not indefinitely, it appears from the studies Doctor Wayson and associates have been making in Hawaii.

THE DOCTOR GETS HIS MAN

Two hold-up men learned a lesson a few weeks ago which they can ponder while behind the bars. One evening in January they summoned Dr. E. C. Lyon, of Bridgeton, New Jersey, by a fake emergency call, and when he came they took his watch,

money, and car. The doctor at once notified the police, who captured the men before noon the next day.

The doctor's property was recovered, and confessions were obtained from the robbers.

Books

REVIEWED

The Laboratory Notebook Method in Teaching Physician Diagnosis and Clinical History Recording. By Logan Clendening, M.D. Octavo of 71 pages. St. Louis, C. V. Mosby Company, 1934. Paper, 50c.

This is a small inexpensive pamphlet which attempts to teach physical diagnosis by applying laboratory instruction methods. The proper method of history taking and physical examination are indicated on one side of the page by well directed questions, while on the opposite page is space for notation of findings.

The method appeals to the reviewer for he feels that it is the proper one to teach accuracy in recording physical findings in a systematic way. In addition, this method will give the instructor an opportunity of knowing whether the student actually saw, felt, and heard what he was expected to.

ARTHUR E. LAMB

The Patient and the Weather. By Wm. F. Petersen, M.D. assisted by Margaret E. Milliken, S.M. Volume III, Mental and Nervous Diseases. Quarto of 375 pages, illustrated, lithoprinted. Ann Arbor, Edwards Brothers, 1934.

Even though one may not accept many of the tenets of the author, one cannot help but admire the scholarly work of Dr. William F. Petersen of the Department of Pathology and Bacteriology of the Medical School of the University of Illinois.

Many of us have always felt that changes in the weather affect our moods; but we have never stopped to question why or how. The author, however, presents a wealth of material and formulates a theory which, he contends, demonstrates the fact "that meteorologically induced alterations of the humoral milieu are associated with changes and behavior of the patient." To substantiate his theory the author presents the case histories of patients suffering from the psychoses and from such diseases as multiple sclerosis, tabes, poliomyelitis, and epidemic meningitis. Numerous charts of weather conditions are submitted to show that psychic alterations in these patients are actually initiated by meteorological events, and that a close relationship exists between reactive states and the weather.

In the case of such diseases as multiple sclerosis, the author contends that meteorological alterations produce vascular spasms which result in anoxemia of the central nervous system; and prolongation and frequent repetition of this state ultimately re-

sults in localized degeneration. Personality types, as delineated by Kretschmer, are a very important factor in the author's theory and he stresses the fact that the various types present chemical differences which are dependent on meteorological events.

Petersen sees in the changing mental picture of the psychoses merely alterations of the chemical state of the body. While it may be an attractive theory the reviewer feels that few psychiatrists will subscribe wholeheartedly to it. Certainly the psychoanalysts will take issue with him when he says, "I have the impression that the vogue of psychoanalysis, too, has been a handicap" in the study of mental diseases. He completely disregards the work of Freud, Abrahams, and others on the psychoses.

On the whole the book is stimulating and opens up a possible new avenue of approach to an understanding of nervous and mental diseases. The third of a series of a study on "The Patient and the Weather," this volume deals with nervous and mental diseases. The cases are from the Psychiatric Institute of the University of Illinois. The author was assisted in his studies by Dr. Low, who made the psychiatric examinations, Dr. Olkon, who studied the skin capillaries, and Dr. Darrow who made the psychogalvanic studies.

The publishers found it necessary to use a different format which they feel is as clear and legible as a printed text. However, the reviewer found it tiring to the eyes. One can appreciate the fact, however, that with the large number of text figures only some such process could keep the cost of publishing at a minimum.

JOSEPH L. ABRAMSON

Gynecology. By Brooke M. Anspach, M.D. Fifth Edition, revised. Octavo of 832 pages, illustrated. Philadelphia, J. B. Lippincott [c.1934]. Cloth, \$9.00.

To review the fifth edition of this well-known textbook on gynecology is an enjoyable task. The statement of the publishers that this edition is re-illustrated, reset, and completely revised by the author is fully borne out by a careful reading of the text. In this day of gynecology and obstetrics in the form of multiple volumes and of monographs we may possibly lose sight of the importance of a well done single textbook.

This book is unusual in several respects. It gives the fundamentals of gynecology

clearly and concisely. It is up to the minute in its consideration of the newer aspects of gynecology. It will be found of value not only to the student and to the busy practitioner, but also to one interested in more extensive study, for each chapter closes with an ample bibliography. Complete revision is attested especially by the chapter on physiology, where the more recent investigations in the field of endocrinology are clearly set forth. There are extensive references to the work of Corner, Frank, Hartman, Novak, and others.

The chapter on Endometriosis portrays clearly the somewhat conflicting theories of R. Meyer and Sampson. Presacral sympathectomy is skillfully illustrated and discussed in the chapter on Disorders of Menstruation. Several chapters are devoted to urological gynecology, and there is one on sterilization and therapeutic abortion including a consideration of methods of contraception.

The illustrations throughout the text are on the whole excellent, especially in the case of the generous sections on operative technic. The work is perhaps fittingly concluded by a splendid chapter on Radiation Therapy.

The reviewer believes this text to be an excellent single volume presentation of gynecology for students, and since it is as up-to-date on new and controversial subjects as it is possible to make a textbook, it can hardly be beaten as a ready reference for the busy practitioner. Even the specialist may find it of value as an up-to-date text for its unusually complete bibliography.

The author and the publishers are to be congratulated upon the new fifth edition of this already well-established work.

ONSLow A. GORDON, JR.

Cataract. Its Etiology and Treatment. By Clyde A. Clapp, M.D. Octavo of 254 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$4.00.

Here is a fine volume which brings together in a clear course manner the recent progress of our knowledge of Cataract. Particularly valuable are the chapters on "Embryology," "Slit-lamp Anatomy," "The Metabolism and Chemistry of the Lens," and the short, snappy descriptions of the numerous forms of operative technic.

Needless to say, the various types of cataract are elucidated, and though the reviewer does not feel that a classification of characteristics is particularly facilitated by this work, yet it is a direct step toward the time when a completely satisfactory classification will be possible.

It seems to the reviewer that this work supplies a definite need in modern ophthalmic literature. Dr. Clapp in his prefatory note emphasizes the fact that it is not possible to cover the entire compass of our knowledge on cataract in this work; nevertheless the reviewer thinks more emphasis might have been placed on one or two points. There is no illustration of the normal lens, nor is there one showing its relations. One is led to expect some sort of picture of these because the section on embryology is so satisfactorily illustrated.

In the chapters on operative technic, a beginner would have difficulty in understanding the mechanism of lens expression, the rationale of the procedure; illustrations showing the lines of force directing the unseating of the lens, and so on, would, to the reviewer's mind, make for more lucidity.

Under the heading of "Preparation of the Patient" we find listed the various types of routine examinations necessary; but Dr. Clapp apparently lays little importance to a study of the gastrointestinal tract—other than the gallbladder—or the genitourinary tract. This is a bit surprising if one believes the modern dictum, "30 per cent of all men over 30 years of age have some sort of upsets of the prostate gland."

In the section on postoperative complications there is a well arranged review of the various problems which may develop; the treatment is outlined for each. There seems to be no discussion of late iritis endogenous unless the author means to accept its occurrence only as sympathetic ophthalmia or endophthalmitis phacoanaphylactica.

Well printed and clearly illustrated it is a volume very worth while.

JOHN N. EVANS

A Manual of the Practice of Medicine. Prepared especially for students. By A. A. Stevens, M.D. Thirteenth Edition, Revised. Duodecimo of 685 pages. Philadelphia. W. B. Saunders, 1934. Cloth, \$3.50.

This popular little book, the first edition of which was published in 1892, has been found useful by at least two generations of medical students and is also a very convenient volume for any practitioner for hurried reference. In this edition some new material has been added and the older subject matter well revised.

Each section is generally preceded by a brief discussion of the general symptomatology of the group of diseases. A surprisingly large amount of information is supplied in a small volume.

W. E. McCOLLOM

**ADDRESS DELIVERED AT THE DINNER TENDERED
DR. GEORGE W. SARGENT**

April 9, 1935, in Honor of His Fiftieth Year of Membership in the Ontario
County Medical Society

BY ARTHUR J. BRIDGIL, M.D.

President of the Medical Society of the State of New York
ALBANY

Mr President, Dr. Sargent, Ladies and
Gentlemen

We are gathered together to extend our felicitations to one who for fifty years has been a member of the Ontario County Medical Society and who in 1904 was President of the organization at the time another colleague celebrated his golden anniversary

When the famed Osler left this country to assume the professorship at Oxford, a large dinner was given in his honor in New York City. Dr. Wilson referred to his greatness as a teacher, clinician, and consultant but could say nothing about him as a practitioner. Osler was not like your honored guest who has sought the dim and shaded light of the sickroom rendered patient daily service to the weary sufferers, made the tiresome round of daily calls and has known the vexations of failure of approved treatment to accomplish the desired result.

Early one morning in 1853 a child was born in a town in rugged Vermont. He lived through the usual vicissitudes of all boys in that place and age to reach manhood, to pass through medical school enter into the practice of the healing art and on April 9, 1935, be signally honored by his fraternal confreres.

Through this long span of years Dr. Sargent, you have seen the rise and fall of political parties, the dissemination of much false doctrine in medicine, and many changes in the world at large, so that we your friends pause to look back upon the years to note some of the hard-

ships you endured, some of the satisfactions which came to you, and then pass in memory with you down the stream of time on which your bark of life has been sailing for 82 years.

The roads were few and rough when in 1853 the physician brought you into the world. Prenatal supervision was unknown and hospital care at delivery not practiced in Vermont, so that your birth meant a long journey for the doctor and a longer vigil for the friends of the family who helped to make things ready for your arrival. After labor there was refreshment and congratulations followed by a slow ride for your doctor in an old two-wheeled gig. The physician of your childhood was a friend, a counsellor and a guide, serving both as a spiritual and corporal mentor. You were his disciple and have always followed in his footsteps, helping the sick of body and mind.

Your early schooling was under ideal conditions, for you learned how to study and to think and soon found that to acquire knowledge application to the task was essential. You were not kept in the modern school where all thought food is so predigested that even the centers of personal ideas often fail to develop because of lack of mental exercise. Your preliminary education in Burlington and later at Dartmouth in Hanover covered the essentials of the classics. When it came time to study medicine you chose Syracuse Medical School, at that time recently organized with professors from the Geneva institution. You were trained

in perception with few accessories and no elaborate physical or chemical studies. You learned to depend upon yourself, early developing self-reliance, a directness of approach to sickness, and a confidence in the omnipotence of the Divine One.

Four others graduated with you in the class of 1879. At that time there were seventeen faculty members in the Department of Medicine at Syracuse University. They were garnered from the surrounding towns as well as recruited from the city of Syracuse. You were in intimate contact with doers of deeds, not theorizing theorists. For three years you lived in an atmosphere of service, in a school "intended to promote the highest welfare of its students, physical, mental and moral," a college conducted by church and state. The tuition for three years was \$285. How different today when many deserving, promising young men are kept out of medicine because it costs too much in money and time. There are those who, looking back fifty years, claim that you were not well grounded in the art of medicine and knew little of the science, but, Dr. Sargent, you had and used the God-given power of observation and by training, enlarged that intangible quality without which no one can ever become an ideal physician. After graduation you started practice in Skaneateles and joined the Onondaga County Society, but fortunately for the people in and about Seneca Castle you moved there in 1884 to continue your faithful devotion to the sick. When in 1885 you joined the Ontario County Medical Society the country was in a period of prosperity, but you thrived because you gave of yourself and as you gave you grew, for giving is man's method of pruning his tree of life and if he does not give he soon either withers or returns to wood with little or no fruit to close the autumn season.

The year 1885 is very significant for it marks the beginning of State licensing boards to protect the people and the profession of medicine from imposters.

While you were at medical school that mixed blessing the telephone was introduced. In 1879 the gonococcus was discovered by Neisser, while in 1880 Eberth found the typhoid bacillus, which led to the almost complete eradication of that

fearful scourge, typhoid fever. In 1881 Lateran found the parasite of malarial fever, while the year 1882 will always be conspicuous in the history of medical annals because of the epoch-making discovery of the tubercle bacillus by Koch, which forced medical thought into new channels. But, sir, you were living in an historical epoch when cocaine was introduced by Kohler in 1884 as a local anesthetic for eye surgery. This boon to mankind was worthy of a more widespread recognition than it received last year. When new forms of treatment quickly follow new discoveries, the world expects still more marvelous things, and fortunately for mankind, we have, thanks to individual effort, skill, and ability, never disappointed the waiting universe. You saw modern medicine in the making. I can visualize you reading of a new method whereby it became possible to see through some opaque parts of the body, the Roentgen rays of 1895. It is almost impossible to think of living in an age without the diagnostic and therapeutic uses of such a modality which has materially added to the joy and health of hundreds of thousands by aiding in a more accurate understanding of the sick and injured. When you took a postgraduate course in New York in 1905 you absorbed all that was modern and practical and returned home excited over the newly acquired knowledge which was placed at the disposal of your patients.

You watched the eradication of yellow fever follow the Reed and Carroll demonstration of its transmission by mosquitoes. You recall how salvarsan in 1909 soon followed the acceptance of the Wassermann test for the sero-diagnosis of syphilis and how Cushing's monumental work on the brain starting in 1911 created a new division of surgery.

When in 1912 Philadelphia lured you to its quiet scholarly precincts, you were again revived by contacts with the mighty men of that renowned city of medicine. You profited by the lessons taught in the world conflict of 1914-18. Later you examined the new methods of surgery, enthused over the discovery of insulin, became attentive to the liver treatment of anemia and witnessed the return of practical medicine to its own home after a temporary banishment in-

duced by the too hearty and unwise espousal of a new mistress, the laboratory doctor. All these evidences of progress you have experienced in your long period of observation but even now the cycle of life passes to new, larger, and more fruitful fields of medical realization. Medicine is not static, and we have really only begun to make progress. The achievements of the past are but stepping-stones for more wonderful advances in the future.

Fifty years in retrospect is a recorded page, in anticipation it is a thrilling excursion into the unknown. The connection of medicine and the world is active and all true physicians are conscientious citizens.

The material changes which you have witnessed have to a great extent depended upon improved methods of transportation. First the steam railroad followed by the electric tramways, then the marvelous improvement in the highways which made it possible for automobiles to move rapidly and safely even in the remote parts of the county. But not content with conquest of water and earth, the airplane has appeared in the heavens and soon the flying men and women will be numerous. No single force has influenced your life as much as improvement in transportation, which has made it possible for all to mingle freely, not only in this country but also abroad, carrying with them the mode of life with which they are familiar and bringing from foreign lands the mental uplift which always follows the inspection of the antique whether it be in architecture or art. You live in a changing world, no country is now isolated for even if it were impossible to travel the radio fills the night with discord and occasionally with harmony. Space has disappeared. Our mighty country can now be traversed by air in twelve hours, and sometimes it seems that speed has become our obsessing mania.

You Dr Sargent, have seen all this and I venture to say that you often wish for the quiet road where you used to think, where you outlined treatment and finally rejoiced over the cure of a serious little understood disease. The quiet hour of inner communion has almost passed but we will always revere the

memory of the old, staid, plodding family physician who did not know how to live alone, for he served all. Our former standards of a full life are in danger of complete submergence.

The past few years have witnessed astounding changes in the practice of medicine. Diphtheria has almost disappeared and if all children were immunized against it by the use of toxin antitoxin hundreds in this community would be saved from the dreadful effects of that fearful disease. Scarlet fever, septic sore throat, and scores of other diseases are being investigated in the laboratories where vivisection is absolutely essential to the carrying forward of the ever-enlarging task. Diabetes is more promptly recognized and thanks to insulin a comfortable life is prolonged.

We are still confronted by the serious inflammations of the brain, including infantile paralysis with its many handicaps, but even now a cure seems to appear on the horizon and in all probability a preventive treatment will soon become available. In every department of medicine and surgery great strides are being made to conquer the distance between present illness and recovery of health.

Often we hear the demand for a hospital in a remote section of the country. I am convinced that such small hospitals are frequently nothing more than renovated homes where the patient is given a false sense of security for he consciously or unconsciously associates the word hospital with the most efficient special care which never can be available except in large centers.

You have seen the growth of a parasite fed by public funds develop into a noisy mob who have no spiritual leader but rant and rave against all that is organized and sane. You have been compelled to listen to those who wish to destroy life not that they may have a fuller appreciation of moral values but as an expression of a passing fancy of physical abandon. It must be a sign of moral insanity that birth control in its widest and vilest application should be so extensively practiced. You sir must be grieved at this sign of retrogression which augurs ill for the nation.

However we have not assembled to

philosophize but to congratulate you on reaching a milestone of such import that your friends gather to reminisce and the more fearless to prophesy.

We stand at the cross-roads; a cataclysmic tragedy is being opened before us. The very foundation of this great nation sways as the rumblings of a distant earthquake shake it. Our manner of living, our very freedom of thought is threatened and all that we hold dear is brought before a critical board of our inferiors in training and in skill. Dr. Sargent, these are trying days. Fortunately, however, there is an ever widening circle of lovers of liberty who wish to defend our national constitution from the marauding raiders. The clarion call to duty is ringing throughout the land, it is the tocsin, the reveille, the battle signal. Control of medicine has been selected as the first objective of the fight, but the leaders appeal to the workers to stand fast, the traitors and spies, the Benedict Arnolds of medicine are active but as yet they have not contacted the *Andrés*. Well supplied with funds this espionage system spreads its tentacles in all directions drawing young and old into its destroying folds.

Our duty is to protect the interests of our children, the obligation must be kept and the bulwark of our national strength, the constitution, must be defended. Sovietism has no more place in our economic plan of life than socialism. I am disturbed when I read of the printed prevarications regarding the excellence of medical service in other countries. The claims are false.

Dr. Sargent, you could not have lived your life of freedom, your patients could not have gone along their separate paths and medicine could not have reached its present heights if you and they had been fettered by the shackles of state control.

Nothing can take the place of freedom. Neutrality is impossible, the dangers of a new state are sufficiently grave to arouse the people of this nation to attack those

who wish to force foreign failures upon us.

I fear, however, I grow too serious but the importance of the menace had led me to exhort.

Dr. Sargent, on behalf of the Medical Society of the State of New York I congratulate you on this fiftieth anniversary of your entrance into Ontario County Medical Society; and, sir, I wish you a long life to enjoy the fruits of your labors and to prepare for the enjoyment of the future where sorrows have no place and happiness reigns.

The words of your contemporary, Oliver Wendell Holmes, seem especially appropriate on this occasion:

There is no time like the old time, when
you and I were young,
When the buds of April blossomed and
the birds of spring-time sung!
The gardens brightened glories by summer
sun are nursed,
But oh, the sweet, sweet violets, the flowers
that opened first!

There is no place like the old place, where
you and I were born,
Where we lifted first our eyelids on the
splendors of the morn,
From the milk white breast that warmed
us, from the clinging arms that bore,
Where the dear eyes glistened o'er us, that
will look on us no more!

There is no friend like the old friend, who
has shared our morning days,
No greeting like his welcome, no homage
like his praise;
Fame is the scentless sun-flower, with
gaudy crown of gold;
But friendship is the breathing rose with
sweets in every fold.

There is no love like the old love, that we
courted in our pride;
Though our leaves are falling, falling, and
we're fading side by side,
There are blossoms all around us with the
colors of the dawn,
And we live on borrowed sunshine, when
the day-star is withdrawn!

344 STATE STREET

STATISTICAL REPORT OF 1,016 HERNIAE ON SECOND SURGICAL DIVISION AT ST VINCENT'S HOSPITAL

From 1924 to 1933

MAURICE CULMIR O'SHEA, M D
NEW YORK CITY

Introduction

During the 10 years of 1924-1933 1,016 herniae were treated by the second surgical division of St Vincent's Hospital, on the service of its late director, Dr George David Stewart, and his successor, Dr Raymond P Sullivan.

In analyzing these, the incidence of infection, the mortality rate, the predisposition of weakness on one side of the body, and the percentage of strangulation or incarceration of the hernial contents have been investigated and tabulated as well as the records on the charts will permit

TABLE I

Herniae of all types	1016
Admissions with diagnosis hernia	867
Bilateral herniae	139
Double herniae	8
Triple herniae	2
Acute hernia (strangulated or incarcerated)	92
Non acute herniae	924
Herniae repaired	918
Herniae not repaired	98
Operations (acute and non acute)	791
Deaths (one nonoperative)	19

Classification

There were 867 admissions on the second surgical division during this period of 10 years with the primary diagnosis of hernia. This does not include the numerous additional patients who had herniae classified under secondary diagnosis or complications but it is reasonable to assume that this number is considerable. Moreover this total would probably be more than doubled if the herniae repaired by the surgeons on the first surgical division and special division were to be added.

Thus, herniae have been a common affliction in this past decade of strenuous and laborious work, in a populace which has for many years been indifferent to its hygiene, physical development, and other factors. In these 867 tabulated admissions there were 1,016 herniae, classified

according to location, type, and severity (See Tables I and II). Of these, 139 were "bilateral," 8 "double," such as both inguinal and femoral or inguinal and ventral, and two patients had "triple" herniae, one being afflicted with two femoral and one inguinal the other with an incisional hernia as well as bilateral inguinal herniae.

In summary, 826, or 81.3 per cent, were inguinal, 63, or 6.2 per cent, were femoral, 121, or 11.9 per cent, were in the ventral abdominal wall, 3, or .29 per cent, were lumbar, and another 3, or .29 per cent, were internal. Ninety-two or 9.05 per cent were "acute" cases, being either strangulated or incarcerated, and 924, or 90.95 per cent, were "non acute."

TABLE II

781 Inguinal	} 826 (81.3%)
45 Inguinal (acute*)	
37 Femoral	
26 Femoral (acute*)	} 63 (6.2%)
15 Umbilical	
9 Umbilical (acute*)	} (93 or 9.1%) 121 (11.9%)
55 Ventral	
9 Ventral (acute*)	
4 Epigastric	
1 Epigastric (acute*)	
28 Incisional	} (2.8%)
3 Lumbar	
1 Internal	} 3 (0.29%)
2 Internal (acute*)	

1,016 Total herniae in 10 years time

Causes

The actual causative elements in all herniae are either congenital or acquired but the "causes" of the onset of these herniae are manifold. Almost every femoral hernia had a gradual onset of unknown causation while the herniae of the ventral wall of the abdomen were congenital in origin in a few cases, but in the vast majority of cases followed shortly after a previous abdominal operation. The 3 lumbar herniae were subsequent to nephrectomy operations and the 3 in internal herniae were directly traceable to

* Either strangulated or incarcerated

either a congenital anomaly or a previous intra-abdominal surgical procedure.

The causes of inguinal herniae were numerous, though in nearly all cases directly due either to a sudden muscular effort, or an overtaking of the abdominal musculature.

In order of frequency, causes are so divergent as: (1) lifting heavy objects; (2) coughing spasms; (3) strenuous physical exercises; (4) painting ceilings of rooms; (5) blowing up toy balloons, and (6) getting out of autos. In a very small percentage of these cases the causative element was direct trauma to the groin.

Ventral Wall Herniae

Although not to be classified as recurrent herniae, the tremendous total of 121 incisional, ventral, umbilical, and epigastric herniae is far from a complimentary commentary on the surgeon's success in the closing of wounds of the abdominal wall. This varied nomenclature is due, in most instances, to the changing of the terminology in our filing system, so that with the passing of years we have different diagnoses describing, with but few exceptions, the one condition, an incomplete or infirm closure of a previous wound of the ventral wall.

The few exceptions are those occasional ventral-wall herniae where no previous surgery had been attempted and where a congenital defect existed or a severe rupture of the muscle fibers occurred. The percentage of 11.9 per cent of all herniae admitted is rather high for ventral wall herniae, but may be partially explained by the fact that a large percentage of these cases was private patients referred to the older surgeons of our division because of their skill and their reputations. Of these 121 cases, 19 were complicated further by being either incarcerated or strangulated, thereby showing a tendency toward this acute condition in 15.7 per cent of the ventral wall herniae. (Table II indicates how diverse are the diagnoses for the herniae found in the anterior wall of the abdomen.)

Sex Incidence

Inguinal herniae are found in males in 94.9 per cent of the cases. Femoral

herniae, although commonly believed to be found more generally in women, were present in females in only a small majority. Herniae of the ventral wall were present in males in a slightly larger number than females. Internal herniae were found to be present in one child and two adult males. It is interesting to note that with but few exceptions all the strangulated or acute cases were found in males.

Side Incidence in Inguinal and Femoral Herniae

Almost 56 per cent of the non-acute inguinal and 71.1 per cent of the acute inguinal herniae occurred on the right side of the body. (See Table III.) All inguinal herniae when taken together showed a predisposition for the right side in 56.7 per cent of this type of hernia. Femoral herniae were even more commonly found on the right side than were inguinal herniae, for 59.5 per cent of the non-acute femoral herniae and 88.5 per cent of the acute femoral herniae were located in the right groin, thus showing that 63.4 per cent of all femoral herniae were on the right side. As will be seen below in the discussion of strangulations, there is an even greater predisposing tendency for a relatively higher percentage of strangulations on the right side than on the left side of the body.

The causes of this preponderance on the right side are difficult to ascertain, but definite activating influences must be borne in mind, namely, that the vast majority of persons are right-handed and do most of their heavy lifting with the right arm, while the musculature of the left side of the spine and abdominal wall braces itself to assist in the lifting process, thereby leaving the musculature on the lower right abdominal wall proportionately relaxed. Secondly, many of the multitude of small loops of the ileum lie free in the right lower quadrant of the abdomen, where because of their smaller size they are more easily forced through the inguinal ring by the increased abdominal tension resulting from coughing and straining efforts. The congenital predisposition for oblique inguinal herniae on the right side is influenced by the later descent of the right testis and the delayed (or later) closure of the right

"processus vaginalis peritonei" in the male and the right canal of Nuck in the female, as stated by Erdman *

TABLE III

Inguinal		
Right	436	} Right side in 56.82%
Left	345	
Total	781	
Acute Inguinal		
Right	32	} Right side in 71.11%
Left	13	
Total	45	
Femoral		
Right	22	} Right side in 59.5%
Left	15	
Total	37	
Acute Femoral		
Right	23	} Right side in 88.5%
Left	3	
Total	26	
All inguinal herniae (826)—56.65% on right side		
All femoral herniae (63)—71.43% on right side		

"Acute" Cases

Strangulations and Incarcerations Because so many of the operative reports, clinical histories and final diagnoses vary extensively in the concept of the words "strangulation" and "incarceration," it is necessary to classify both these conditions together and term them "acute cases." There follows a brief review of the derivations and definitions of these two rather ambiguous and frequently misused words, "strangulated" and "incarcerated."

Incarcerated, from the Latin words *in* and *carcus* meaning "in" and "prison," is defined by the American Illustrated Medical Dictionary as "Imprisoned, held fast or constricted, thus causing an 'unnatural retention or confinement of a part'."

Strangulated, from the Latin word *strangulatio*, is defined in this dictionary as "An arrest of the circulation in a part due to compression." It further defines a *strangulated* hernia as "one which is tightly constricted and has or is likely to become sphacelated." The word "sphacelate" (is from the Greek *σφακελος*) meaning "to become gangre-

nous." Thus it is seen *incarceration* does not imply a disturbance of circulation but a simple imprisonment, while *strangulation* implies a congestion or a worse disturbance of circulation which may progress to the state of gangrene.

Table IV shows how common and how diverse are the so called "acute" (i.e., strangulated and incarcerated) herniae, for 45 were inguinal, 26 femoral, 2 internal, and 19 were located in the anterior abdominal wall, where 9 ventral, 9 umbilical, and one epigastric were found. These total 92 "acute" cases and comprise 9.05 per cent of the total 1,016 herniae reported.

TABLE IV
(Total herniae 1,016)

Acute inguinal	45
Acute femoral	26
Acute ventral	9
Acute umbilical	9
Acute epigastric	1
Acute internal	2
Total acute herniae	92
Percentage of acute herniae	9.05%

Acute, i.e. either strangulated or incarcerated

Tables II and V make it apparent that 19 of the 121 herniae of the anterior abdominal wall were "acute" and thereby showed a percentage of 15.7 strangulation or incarceration in this type.

Of the 826 inguinal herniae 45 were "acute," comprising 5.45 per cent of this total, while 26 of the 63 femoral herniae were acute and aggregated to the stupendous figure of 41.3 per cent strangulation and incarceration for this class.

By delving further into the statistics of Table V the proportionately greater tendency for acute manifestations to predominate in the herniae of the right side of the body becomes self evident. Here it is found that inguinal herniae on the right side become "acute" in 6.84 per cent while those on the left side become seriously involved in only 3.63 per cent of the cases about half of that on the opposite side. With reference to the femoral herniae a greater accentuation of the same condition exists, for right femoral herniae were found to be either strangulated or incarcerated in 51.1 per cent of the cases and left femoral herniae in only 16.7 per cent. When it is con-

* Cf. Nelson's Surgery chapter on Herniae

sidered that more than one of every two right femoral herniae become acute, the danger of a hernia in this particular area is alarming.

TABLE V. PERCENTAGE OF STRANGULATION

<i>All Inguinal Herniae</i>		
Right	436 + 32 (acute) = 468	(6.84% of these acute)
Left	345 + 13 (acute) = 358	(3.63% of these acute)
Total	781 + 45 (acute) = 826	(5.45% of these acute)
<i>All Femoral Herniae</i>		
Right	22 + 23 (acute) = 45	(51.1% of these acute)
Left	15 + 3 (acute) = 18	(16.7% of these acute)
Total	37 + 26 (acute) = 63	(41.3% of these acute)
<i>Ventral Wall Herniae</i>		
Non-acute	102	(15.7% of these acute)
Acute	19	
Total	121	

Infections

There was a total of 43 "deep" infections, 32 being in non-acute cases and 11 in acute cases. Of these 11 infections 5 were in strangulated cases and 6 in incarcerated cases. Considering that 918 hernia repairs were made at 791 operations and that 43 deep infections took place it is seen that the percentage of these infections when based on the number of herniae repaired was 4.68 per cent, and when based on the number of operations performed was 5.43 per cent. As might be expected the acute cases had a higher rate of infection than the non-acute cases. The percentage in acute cases was 13.58 per cent,—the same for the number of operations and repairs attempted; and in the non-acute cases was 3.82 per cent when figured on the number of repairs made and 4.5 per cent when computed on the number of operations performed. Herniae repaired by living fascial strips (Gallie Method) had a high percentage of infection.

Hence, infections occurred about three and one-half times more frequently in acute cases than in non-acute cases. This high percentage of infection in acute cases may be partially explained by the relatively hasty skin preparation and from the fact that with impairment of circula-

tion some of the bacteria of the intestinal contents had penetrated into or through the devitalized walls of the intestines and were being cultured in the transudates expressed from the venous circulation of their mesenteries.

TABLE VI. INFECTIONS AND COMPLICATIONS

Deep infections (acute cases)	11
Deep infections (non-acute cases)	32
Total deep infections	43
<i>Other Complications</i>	
2 Fecal fistula (one from gangrenous bowel)	
1 Urinary fistula	
1 Hydrocele of cord	
Small hematmata and inconsequential stitch abscesses not uncommon.	

TABLE VII. PERCENTAGE OF DEEP INFECTIONS

<i>Total Deep Infections</i>	
Based on number of herniae operated on..	4.68
Based on number of operations.....	5.43
<i>Percentage in Acute Cases</i>	
Based on number of herniae operated on..	13.58
Based on number of operations.....	13.58
<i>Percentage in Non-acute Cases</i>	
Based on number of herniae operated on..	3.82
Based on number of operations.....	4.5

The causative factors in these infections have been investigated from all angles. The wards on which the patients had their preoperative skin preparations made, the periodicity of the infections, the surgeons performing the operations, the house surgeons during whose tenure the operations were performed and the organisms themselves have been carefully tabulated. The deductions from these analyses are in no manner conclusive and it is more than probable that the causative factors are manifold.

In those cases in which cultures were made from the infected wounds, it was found that the bacillus coli was the predominating organism in about 50 per cent of the cases, and in the remaining 50 per cent the infective agent was either the staphylococcus aureus or the staphylococcus albus. The streptococcus was rare.

It might be well, if, in an effort to reduce the number or eliminate entirely these infections, the same technic that is used in bone and joint surgery be resorted to. First, subject the patient to a three-day skin preparation while he

is being worked-up preoperatively; secondly, never attempt to wash the iodine off the skin with alcohol until the iodine has dried and has penetrated into the cells and the pores of the skin; thirdly, that the genitalia be covered with towels wet with bichloride of mercury; fourthly, that skin towels be applied to the wound edges immediately after incising the skin; and fifthly, that fingers be kept out of the wound as much as possible and wipes when once used, be discarded.

Complications

The direct complications other than the infections and recurrences relating to these herniae were not numerous. There were two fecal fistulae, one urinary fistula, and one hydrocele of the cord. The urinary fistula and one fecal fistula closed spontaneously after a long convalescence. The other fecal fistula was the result of a gangrenous bowel in a patient who had a strangulated hernia with intestinal obstruction. The presence of small hematomas or inconsequential stitch abscesses was recorded in many instances. Atrophy of the testicle occurred in one case of a strangulated inguinal hernia.

Operations

Of the 1,016 herniae in the 867 cases admitted, 98 herniae were not repaired for manifold reasons, such as: (1) The age of the patient not justifying the surgical risk; (2) the spontaneous reduction of the incarcerations with subsequent temerity of the patient; (3) active gonorrhoeal urethritis; (4) insufficient symptoms, and (5) the patient signing the responsibility book, and departing without further treatment. Of these 98 herniae which were not operated upon 11 were either strangulated or incarcerated on admission.

Of these 11 nonoperative "acute" herniae, 10 reduced themselves spontaneously after emergency conservative therapy of morphine medication, elevating the foot of the bed and applying ice bags to the affected area while the operating room was being prepared. The remaining nonoperative "acute" case refused operation and died two days later from the toxemia of the intestinal obstruction.

Of the 918 herniae which were repaired, 81 were so-called "acute" cases

(being either strangulated or incarcerated), and the remaining 837 herniae were classified as "non-acute" and were repaired in 710 operations, as at 127 operations "double" or bilateral herniorrhaphies were performed.

TABLE VIII. OPERATIONS

Non-acute herniae repaired.....	837
"Acute" herniae repaired.....	81
Total herniae repaired.....	918
Total number of operations.....	791
Operations with "double" repairs.....	127
Herniae not operated on.....	98
Operations for "acute" herniae.....	81
Operations for "non-acute" herniae.....	710

As to the technic and methods of surgery used in the different types of herniorrhaphies, it has been interesting to note that although ten years' time has elapsed and the staff of the division has changed considerably, the methods of repair have not been changed or altered except as to a few small and inconsequential details and modifications. However, in recent years many of the staff have evidenced a trend away from the Bassini type of repair for inguinal herniae and the adoption of the method of imbrication of the fascial planes after having completely transplanted the cord. There was no appreciable difference in the rates of infection and recurrence in cases repaired with such different types of sutures as kangaroo tendon, chronic catgut, or black silk.

Anesthesia

The type of anesthesia used in these operations varied with the severity of the condition and the judgment of the surgeon. Gas-ether was the most commonly employed. This was followed in order of frequency by spinal anesthesia (nupercain and neocain), local or regional anesthesia (novocain), and avertin, which was augmented by gas or ether. During the past year or two many surgeons have strayed away from the wave of spinal anesthetics and have returned to the use of gas-ether. I believe that in the near future when certain neurologists have finished their research work on the late effects to the spinal cord injury from spinal anesthesia, that this mode will be used less and less. However, it is still of great value in acute cases with intestinal

obstruction and in persons suffering from pulmonary tuberculosis.

Mortality Rate

In compiling the mortality rate an effort has been made clearly to denote the exact rate of fatalities for both the "acute" or emergency type of case and the "non-acute" or interval type, as well as the percentage rate for the condition when viewed as a whole. Thus there were 19 deaths, 18 of which were post-operative and one in a patient who had a strangulated hernia but refused operation. These 18 deaths followed after 791 operations and give an operative mortality rate of $2\frac{1}{4}$ per cent for all herniae.

Thirteen of the 18 deaths occurred in the 81 acute cases which were either strangulated or incarcerated at the time of operation, thus making a mortality rate for strangulated and incarcerated herniae of 15.3 per cent. The remaining 5 deaths resulted from postoperative complications in the 710 operations for non-acute herniae and represent the somewhat low mortality rate of 0.7 per cent for these non-urgent cases.

If the one nonoperative death and the 10 cases which, although incarcerated on admission, reduced themselves spontaneously without operation are added to the figures for acute herniae, it is seen that 14 deaths occurred in the 92 patients with acute herniae, resulting in an unchanged mortality rate for this condition of 15.3 per cent.

TABLE IX. MORTALITY PERCENTAGE

Total deaths	19
(1 refused operation)	
Deaths (acute cases)	14
(1 refused operation)	
Deaths (non-acute cases)	5
Mortality % (operative) (total cases) ..	$2\frac{1}{4}\%$
Mortality % (operative) (acute cases) ..	16%
Mortality % (operative) (non-acute cases)	0.7%

Hospitalization Time

The average length of the hospitalization time for herniae which were operated on was 24 and a fraction days. Bilateral herniae averaged 25 days. Acute cases, infected cases and ventral herniae usually had a somewhat longer duration and tended to raise the average hospitalization time to 24 days.

Recurrences

Because in the earlier years of this decade no follow-up of the cases was practical, it is difficult to estimate exactly the percentage of recurrences with which our efforts of the past have been marked. If the number of cases which were operated upon for recurrent herniae in the hospital was a fair estimate or barometer of our own results deductions would be simple, as only 56 of the total 1,016 were recurrent herniae, comprising $5\frac{1}{2}$ per cent of the total. However, if the internal, lumbar, and various types of ventral wall herniae are subtracted from the total we find that there were 889 femoral and inguinal herniae, and since nearly all our recurrent herniae were of these two types, a more accurate and fair estimation shows that 6.1 per cent of these were recurrent. Of the 56 recurrent herniae 2 were femoral, 51 were inguinal, and 3 were ventral.

We all know that not all of our poor results returned to this hospital for a secondary repair, and it is interesting to note that of all the recurrent herniae where the records stated what hospital the original operation was performed in, only about 25 per cent of these had their initial repair made in St. Vincent's Hospital. Then also, many of these so-called recurrent herniae were not truly "recurrent," for their primary repairs lasted in some instances as long as 7, 12, and 20 years, and were performed in such far scattered sections as Russia, Central Europe, California, and two of our neighboring hospitals. The causative factor in recurrences was, in almost every case, the lifting of heavy objects.

During the time when a follow-up clinic was being maintained we had a 60 per cent return of ward patients and they showed satisfactory results in $88\frac{1}{2}$ per cent of the inguinal herniae (direct and indirect) observed, and recurrences in $11\frac{1}{2}$ per cent of this limited number of cases.

Comparison to Statistics of Other Hospitals

Comparison of some of the percentages with those of other hospitals is interesting, chiefly because of the relative similarity of the results. New York Hospital

and Mount Sinai Hospital found that femoral herniae occurred on the right side in about 67 per cent of their cases, while at St. Vincent's Hospital they comprised 71.4 per cent. At New York Hospital strangulation of femoral herniae occurred in 26 per cent, at Mount Sinai Hospital in 32 per cent, while at St. Vincent's Hospital our percentage for acute cases (both strangulated and incarcerated) was 41 per cent.

In other hospitals inguinal herniae were found to occur on the right side in about 60 per cent of their cases, but our percentage is slightly lower, being 56.65 per cent. Statistics on ventral wall herniae are difficult of comparison because of varied nomenclature, but at this hospital we found that they comprised 11.9 per cent of all herniae and exclusive of incisional herniae 9.1 per cent. At Mount Sinai they formed 15 per cent and at New York Hospital they totaled 17.2 per cent. However, at these two latter institutions they also report incisional herniae separately; forming 3 per cent of the cases at Mount Sinai and 5.5 per cent at New York Hospital, but in our instance the newly termed incisional herniae comprised only 2.8 per cent of our cases.

The percentage of recurrences in indirect oblique inguinal herniae in other hospitals are reported as follows: New York Hospital (second division), 3.1 per cent (c/f Dr. Seward Erdman); Massachusetts General, 7 per cent (c/f H. Davis, 1916); Johns Hopkins, by A. S. Taylor, 8.4 per cent in 356 patients examined, and 3.4 per cent in 460 patients who answered by letter and 18 per cent for direct inguinal herniae. Ruptured and Crippled, 8.7 per cent (a more recent report puts their figure at over 10 per cent, based on 1,000 inguinal herniae repaired by the Gallie method,* and 16.4 per cent for direct inguinal herniae). Here at St. Vincent's we have no accurate figure to compare with these because of the

lack of a follow-up in the earlier years, but based on our recent follow-up our percentage of recurrence in direct and indirect inguinal herniae when considered together is 11½ per cent.

Summary

Tabulation shows that 1,016 herniae occurred in 867 admissions on our service during the 10-year period of 1924 to 1933; that 791 operations were performed and 918 herniae repaired with the resultant death of 18 patients; that 13 of the 18 deaths occurred among the 81 acute (strangulated or incarcerated) cases and only 5 deaths in the 710 patients operated on for non-acute herniae; that 43 deep infections occurred; that infections were three and one-half times as frequent in acute cases as in non-acute cases; that 9.05 per cent of all the herniae presenting themselves were "acute"; that at least one out of every two right femoral herniae was acute and that all herniae were more common on the right side of the body, and became strangulated or incarcerated more than twice as frequently on the right side as those on the left side of the body; that 95 per cent of the inguinal herniae were found in males and that femoral herniae were not uncommon to men; that the percentage of recurrences cannot be accurately ascertained because of a limited follow-up of the cases, but the available statistics show 11½ per cent recurrences; that the method of repair and the surgical technic has undergone but little change; that deep infections in acute cases occurred in 13.58 per cent and in non-acute cases in 3.82 per cent of the wounds; that no one cause or origin can be ascribed to such infections as have occurred; and that our operative mortality in 791 operations for all types of herniae was 2¼ per cent, that in 81 operations for "acute" herniae it was 16 per cent, and that in 710 operations for the repair of 837 non-acute herniae it was only 0.7 per cent.

*c/f Dr. Carl Burdick and Dr. Bradley Coley.

AMERICAN HEART ASSOCIATION

The Eleventh Scientific Session of the American Heart Association will be held on Tuesday, June 11, 1935, from 9:30 to 5:30

P.M. at the Hotel Claridge, Atlantic City, N. J. The program will be devoted to various subjects on cardiovascular disease.

THE COMMON CAUSES OF REACTION FOLLOWING THE USE OF INTRAVENOUS SOLUTIONS AND THEIR PREVENTION

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In surgery and medicine the use of various solutions intravenously such as whole blood, citrated blood, saline, glucose, gum acacia, and so on has attained considerable importance as a therapeutic measure. These are frequently used in individuals who are desperately ill, as a life-saving procedure. Following their use, in a number of instances severe reactions have occurred. For this reason many who would like to use the procedure more often hesitate to do so.

Recently four such cases have come under observation. Four patients, all on the surgical service, were given 17 infusions of glucose, seven of which were 5 per cent glucose in saline, and 10, 10 per cent glucose in saline. The temperature of the injected fluid varied from 104° to 116°. On seven occasions the infusion was followed by a chill which was moderate to severe, and a rise in temperature from 2° to 5°, the highest temperature being 106°.

An attempt to analyze the factors which may cause these reactions requires a careful study of all the materials and drugs used in the preparation of the solutions and the technic used in the administration of the infusion.

The Solvent (distilled water)

Florence Siebert¹ in 1923 has shown that certain pyrogenic substances* develop in distilled sterile water if allowed to stand. These substances are soluble, filterable through a Berkefeld filter, and resist boiling. It has been shown however, that these substances do not pass over with the distillate if a "water spray trap" or baffle plates are used. Kent E. Darrow² describes a test for pyrogen: "Heat 100 c.c. of the distilled water to

boiling point in clear pyrex beaker that has been rinsed in the distilled water. Acidulate with 10 c.c. of 10 per cent sulphuric acid, then add 1/10 of one c.c. of twentieth normal potassium permanganate and continue boiling for ten minutes. The faint pink color should remain in the solution if *no* pyrogen is present. If there is any pyrogen present, the color will disappear, as pyrogen is a reducing body." Lewisohn and Rosenthal³ do not believe that single distillation is sufficient to rid the water of pyrogenic substances and they claim reactions may follow the use of such water for the solvent. They believe that triple distilled water should be used.

Distilled water filtered through a Berkefeld filter may carry with it substances deposited on the filter from previous filterations which may cause a reaction. Presbyterian Hospital⁴ attributes most of its reactions to this cause. Berkefeld filters must be cleansed frequently, and must be examined carefully at short intervals (every week) to determine whether cracks or other imperfections may not have developed.

Distilled water becomes acid shortly after distillation due to the absorption of carbonic acid from the atmosphere. Even in well stoppered containers the acidity of double distilled water increases with age (Williams and Sweet).⁴

Secard and Leblanc⁵ have shown that if the distilled water is prepared in copper, nickel, or zinc condensers, it has the property of dissolving some of this metal and causing severe reactions. Darrow² has reported that block tin or hard glass do not give off anything to the water.

The solvent (distilled water) must be freshly prepared and triply distilled. The Berkefeld filter must be cleansed and examined at frequent intervals. The still should be equipped with a "water spray trap" or with baffle plates. The still should not have copper, nickel, or zinc

*Pyrogen is a nitrogenous substance produced by a specific strain of bacteria. It is soluble, filterable, and resistant to heat. The bacteria can be removed by filtration or ordinary sterilization but the by-products (pyrogen) are not removed or destroyed.

condensers. These should be made of block tin or hard glass

Hydrogen Ion Concentration of Solution

The hydrogen ion concentration of the blood is fairly constant at pH 7.4. Convulsions may ensue in patients whose blood has a pH of 7.5 and coma develops long before the concentration reaches 7.0.

Williams and Sweet¹ found that glucose solutions on autoclaving or standing for several hours rapidly become acid. A 10 per cent glucose solution upon boiling for twenty minutes changes its pH from 6.20 to 5.17. On standing in the laboratory for twenty-four hours it changes its pH from 6.20 to a pH of 5.15. They believe that there is a definite relationship between these post-infusion reactions and the hydrogen ion concentration of the injected fluid. They believe that when fluids of a much higher or lower concentration than the blood are introduced into the circulation at a rate, or in excess of, the capacity of the blood to neutralize them, reactions will occur. J. L. Stoddard² reports the prevention of reactions from the acid pH change by the addition of a "phosphate buffer"* to the glucose solution immediately before using.

Darrow² has reported that solutions of an alkaline pH gave more reactions than those of an acid pH. If the alkaline solutions were buffered to a low pH they still gave the reactions, leading one to believe that it was not the pH alone that caused the reaction, but possibly the alkaline impurities that cause the high pH.

There are four ways by which any reactions caused by differences in hydro-

gen ion concentration could be prevented; first by injecting the fluid very slowly so as not to exceed the capacity of the blood to neutralize the fluids being introduced, second, by the addition of a buffer salt (phosphate) to the fluid to be injected (we have had no experience with this method); third, by using only fresh solutions whose hydrogen ion concentration is known and before it changes; fourth, to place freshly prepared solutions of known hydrogen ion concentration in vacuum containers. So long as the vacuum is maintained in the container there is practically no change in the hydrogen ion concentration of the contained fluid.

Age of Solution

Solutions that have contact with air have changes constantly taking place within them. Distilled water, saline, glucose that is old and is not kept in an aseptic vacuum, become contaminated with pyrogenic substances, absorb carbonic acid from the air, or change their pH value, any one of which changes may cause a reaction.

Solutions properly prepared must be used fresh to prevent reactions. All flasks should be dated and not used if more than one week old.

Solute

Glucose. There are many grades and types of glucose on the market. It is essential to use a C. P. anhydrous glucose. The so-called "pure glucose," "commercial glucose," and the glucoses sold under various trade names all contain foreign materials which may cause reactions. The question as to whether or not the use of some substance like sulphuric acid, to whiten the glucose, might cause a reaction is still open. Most manufacturing chemists today, however, decolorize their solutions with a decolorizing carbon.

Great care must be exercised in weighing out the powder and in its transmission to the solvent, that no foreign material is introduced. Weighing machine, containers, and all materials which come in contact with the glucose must all be scrupulously clean.

Sodium Chloride. This can be obtained in the very purest form very readily and only C. P. Sodium Chloride

*Buffer solution is prepared by taking 1426 grams $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$ or 161 grams $\text{NaH}_2\text{PO}_4 \cdot 2\text{H}_2\text{O}$ to 500 c.c. of distilled water. (This "mono sodium phosphate" must be free from aluminum or heavy metals). To this is added 23 N Sodium Hydroxide (Sodium Hydroxide solution is prepared from a saturated solution of the C. P. Sticks). Solution to make a pH of 7.5. It should take very close to 78 c.c. of the sodium hydroxide solution per 100 c.c. of phosphate. One should add 25 c.c. amounts of the phosphate solution to the glucose testing the pH of the combined solution either colorimetrically or electrometrically. The buffer solution becomes .05 pH more acid on auto claving and about .05 pH more acid on being added to the glucose solution. The final pH of the buffered glucose solution should be close to pH 7.4 (Stoddard)

should be used. The use of tablets in the preparation of the solution is to be condemned because of the cohesive substance which is usually necessary to form the tablet and the possible foreign protein contamination on the surface of the tablet resulting from handling.

The mere sterilization of a bacteriologically contaminated drug may kill the organisms, but when these organisms (dead) go into solution, they produce a pyrogenic foreign protein. The same care must be exercised in the weighing and transmission of the sodium chloride as was used in the preparation of the glucose so as to prevent the introduction of any foreign material.

Apparatus

Glassware. There are many grades of glassware from soft to very hard. Little⁷ believes that some grades of soft glassware permit the accumulation of a flocculent deposit in the solution on standing. Such soft glassware should not be used either to collect the distilled water from the still or as containers.

Glass to collect the distilled water or for use as containers must be hard, such as Pyrex. It must be absolutely free of any foreign material, scrupulously clean, alkali free, and nonsoluble.

Filter Paper. This may contain starch or loose fibres which are dissolved into the solution, causing reactions. The best type of paper must be used and the solutions should be filtered at least three times.

Stoppers. One of the most frequent causes for the appearance of fine particles of lint and other material in the solutions is the stopper. To prevent the solutions from coming in contact with the stopper during sterilization one should carefully guard against filling the flasks more than half full so that on boiling, none of the solution comes up to or in contact with the stopper. Gauze, cotton, paper covered stoppers are to be avoided. Pure gum rubber sheeting, properly prepared, may be used. By far the best method would be to use an inverted beaker over the top of the flask. The beaker, in turn, is to be covered with gauze.

Rubber Tubing. The rubber tubing is probably one of the most frequent causes

of reaction. New rubber tubing has a coating of talcum both inside and out which, if not thoroughly removed, may enter the bloodstream and cause a reaction.

Most of the rubber tubing on the market contains sulphur; this gradually sublimates (Little⁷) and becomes deposited on the inner surface. The finely divided particles may then separate off, enter the bloodstream, and cause reactions.

Occasionally small particles of coagulated blood may collect in the tube from a previous case and if this is carried into the bloodstream reactions result.

To prepare rubber tubing properly for use, the Sloane Hospital for Women (New York City⁸) recommends the following: (1) Soak all new tubing in soap and water for one hour; (2) wash well with soap and water; (3) wash in running water; (4) soak for six hours in 4 per cent solution of sodium hydroxide; (5) wash well in running water; (6) wash well in distilled water. Pack and sterilize in the autoclave.

Old tubing should not be used. Pure gum tubing is to be preferred. Between cases this should be thoroughly washed in running water followed by distilled water and sterilized in the autoclave.

Temperature of the Solutions

Considerable stress is laid by some men upon the temperature of the solution. They report that solutions which are too hot may cause a liberation of free fibrin, thereby causing a reaction; they believe, therefore, that cold fluid is much safer. The temperature of the fluid in the flask is not very important; neither very hot nor very cold solutions however should be used. If the flow of fluid to the patient is regulated by a very small-gauge needle such as a 22 to 24 the fluid will go in so slowly that its temperature will be close to that of the room. The use of thermometers either in the flask or in continuity is therefore unnecessary.

The use of a thermometer in the gravity flask may cause a reaction. The flask thermometer is usually removed from some antiseptic solution, washed, and placed in the gravity flask containing the intravenous solution. Distilled water is usually not used for this washing and even though it is done thoroughly, all

particles of foreign matter cannot be removed. These particles may cause reactions. The thermometer in continuity is expensive, very delicate, is frequently out of order and therefore is impracticable.

Sterilization

Reactions may be caused by the results of slips in sterilization technic. If the temperature of the autoclave is too high or maintained for too long a period, caramelization of the glucose may take place. The glucose solution loses its crystal clearness and becomes any shade from a light yellow to dark brown. This caramelized glucose is toxic and should not be used. Saline solutions should be autoclaved for twenty minutes at fifteen pounds pressure. Glucose solutions should be autoclaved without a vacuum for forty minutes at five pounds pressure or at 100° C steam sterilization for thirty minutes on three successive days.

The sterilization of flasks, tubing, and other apparatus by boiling in soda solution or, as more frequently happens in water which is not distilled, causes a deposit of foreign substances on the inside of flasks and tubing which when carried to the patient may give a reaction. Hence only distilled water should be used for the final boiling of all apparatus.

Special Cleansing of Apparatus

After each transfusion, all parts of the apparatus are separated and washed in cold water for the removal of blood. They are then washed in a dilute solution of green soap to which compound solution of cresol has been added to make up about a one per cent solution. They are then thoroughly rinsed in tap water.

All parts are placed in a large pan containing sodium hydroxide (0.1 per cent solution) and boiled for five minutes. They are then transferred to a large pan containing distilled water to remove the sodium hydroxide. The glassware and rubber tubing are again washed with triple distilled water and are ready to be assembled, either in metal boxes or in special bundles and sterilized in the autoclave.

Technic of Administration

The usual technic for the infusion set-

up requires the flask of saline to be emptied into a gravity container. The glucose ampule is opened and its contents added to the saline. The solution is then allowed to flow through rubber tubing and needle into the vein of the patient.

Only too often breaks in technic occur. Any break in technic which allows the introduction of foreign protein may be responsible for a reaction. While watching several infusions given the following breaks in technic were noted:

1 The outside of the glucose ampule was not sterilized before breaking the tip.

2 On adding glucose to saline some of the glass filings went into the gravity container.

3 Stopper from flask not removed aseptically, with sterile gloves or gauze.

4 Mouth of glass containers not flamed before pouring solutions from it after possible contamination on withdrawing stopper.

5 Mouth of gravity container allowed to remain open during entire infusion.

6 Introduction of sterile thermometer into solution using it as a stirring rod. Thermometer had been in an antiseptic solution and although washed with sterile water (not distilled) may carry some pyrogenic substances with it.

All these "breaks" in technic allow for the introduction of air born bacteria which, while not pathogenic are foreign proteins and may cause a reaction.

Solutions that are too hot, too cold, or not isotonic, if allowed to flow into the bloodstream too rapidly may cause a precipitation of fibrin with reactions. The exact temperature of the fluid introduced into the bloodstream is not so important so long as extremes are avoided, room temperature or slightly higher is to be preferred. If the fluids are introduced at a slow enough rate, 4 c.c. per minute, the bloodstream often can accommodate itself to them without reaction.

Conclusions

In those institutions where it has been possible for the same group—a group that understands the factors causing reactions—to give all the infusions, the reactions have been reduced to a minimum. The administration of an infusion is frequently given to the youngest member of the house staff and his inex-

perience may be the reason for many breaks in technic in the administration of the solution which may cause the reactions.

In order to achieve strict observance of the various "don'ts" in the preparation of the solutions, to prevent reactions, requires the establishment of a special unit, a group of nurses who devote themselves exclusively to the preparation of these solutions, to the cleansing of the glassware, tubing and needles, and to the sterilization of the materials used. A definite room must be set aside for the stills, sterilizers, and solutions, a room independent of the operating room. All solutions must be prepared there by the same group of nurses and all apparatus must be cleansed and sterilized in this room. The use of containers* as described by Rosenthal and Lewisohn⁹ is to be recommended.

This unit arrangement works out very well in large institutions where infusions and transfusions are frequent. The expense of maintaining this unit is con-

* These consist of a metal box containing one 250 c.c. gravity flask, one short piece of rubber tubing with glass drip and clamp, a long piece of rubber tubing with stop-cock and long glass connection, a short piece of rubber tubing with adaptor and two needles.

siderable, but compared with the excellent results obtained it can be disregarded. What shall the small institutions do, the ones using only an occasional infusion or transfusion where the expense of maintaining such a unit is prohibitive? For those institutions some form of commercial product, glucose or saline solution, is to be recommended. In the use of concentrated solutions from the commercial ampule (prepared by reliable houses) very few or no reactions have occurred. This should also hold true for the weaker solutions of glucose.

The commercial houses should prepare these solutions, thus saving the hospitals a great deal of time, cost, and effort. The hospitals could demand a stable, sterile solution, insisting on the absence of pyrogenic substances in the solution, the use of hard glass containers, proper stoppers, a supply of pure gum, properly prepared tubing, needle, and so on. The cost of the individual containers of solution may be greater, but if this be weighed against the maintenance of a complete unit, the expense difference would be very slight. By having the various manufacturers compete with each other, a good, moderately inexpensive product would be assured.

1 WEST 86TH STREET

References

1. Seibert, F. B.: Fever Producing Substances Found in Some Distilled Waters, *Am. J. Physiology* 67:90, 1923.
2. Seibert, F. B., and Bourne, J. M.: Cause of Many Febrile Reactions Following Intravenous Injections, *Bacteriology of Distilled Water, Am. J. Physiology* 71:652, 1925.
3. Darrow, Kent E.: A Review of the Causes of Reactions Following Intravenous Injections of Glucose and Normal Saline, *Journal Lancet* 54:65, 1934.
4. Carter, E. B.: Proposed Chemical Test for Pyrogen in Distilled Water for Intravenous Injections, *J. Lab. and Clin. Med.* 16:289, 1930.
5. Presbyterian Hospital: Personal Communication.
6. Williams, J. R., and Swett, M.: Hydrogen Ion Concentration Studies on Distilled Water, Physiologic Sodium Chloride, Glucose and Other Solutions, Used for Intravenous Medication, *J. A. M. A.* 78:1024, 1922.
7. Secard and LeBlanc: *Bull. et mem de Soc. Med de Hosp. de Paris* 34:7, 1912.
8. Stoddard, J. L.: The Avoidance of Intravenous Glucose Reactions, *Boston Med. and Surg. Jour.* 191:1121, 1924.
9. Little, W. D.: Causes of "Reaction with Chill," Following Intravenous Administration of Normal Salt Solution, *Jour. of the Indiana State Med. Ass.* 25:344, 1932.
10. Titus, P., and Dodds, P.: The Common Causes and the Prevention of Reactions Following Intravenous Injections of Glucose—(Dextrose) Solution, *Am. J. Obs. and Gyn.* 14:181, 1927.
11. Lewisohn, R., and Rosenthal, N.: Prevention of Chills Following Transfusion of Citrated Blood, *J. A. M. A.* 100:466, 1933.

ACTION ON MEDICAL EXAMINATION OF EYES

The Comitia Minora of the Westchester County Medical Society has sent to the school and hospital boards of the County copies of resolutions it has adopted disapproving the employment of optometrists to prescribe glasses for pupils and patients who

have not had medical examinations of their eyes. The committee has no desire to impede or criticize qualified optometrists in the legitimate practice of their profession. Its action follows a similar resolution adopted by the A.M.A. in June, 1934.

ORGANIZING A CENTRAL SUPPLY ROOM FOR HOSPITAL SERVICE

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The responsibility of the physician either in private practice or in hospital work is primarily that of securing for his patients the best results, in the treatment of their ailments, which his professional skill can produce. Whatever his attainments may be, his results may be jeopardized by imperfections in the materials used in the treatment he may direct, or by the inadequacy of the tools provided for his work. His responsibility, then, must extend beyond the mere ordering or supervision of treatment, and embrace a careful control of the materials used in that treatment. Only thus may he be reasonably assured that his patients' best interests are being served, and that his efforts on their behalf are not wasted nor rendered ineffectual.

It has been a recognition of this sort of responsibility and a desire to discharge it properly that has led to the establishment of a central supply room at the Roosevelt Hospital. The story of its inception and a description of its organization and management may prove of interest to some who are faced with problems similar to our own.

The development of this department was the natural outgrowth of an effort to rectify a troublesome problem in one therapeutic procedure. It had been recognized for some time that there were occurring far too many febrile reactions and chills in patients to whom intravenous infusions and transfusions were administered. As these methods of treatment became increasingly popular, and were being more and more frequently employed, the difficulty assumed major proportions. For some reason or reasons, of which we were not quite sure, nearly 25 per cent of our patients receiving intravenous treatments developed chills or fever or both. In the spring of 1932 we set out to find the causes of the difficulty and to rectify them.

Careful checking with the laboratory ruled out improper matching of blood as far as transfusions were concerned. In

addition to the accurate typing usually employed, each donor was cross-matched with the recipient before the blood was given. We found, in fact, that the undesirable reactions were occurring with greater frequency in simple infusions than in transfusions, and were led to suspect that in some instances at least the small amount of saline solution used incidentally in our transfusion administration might be at fault. The effort then developed into an attempt to discover and eradicate whatever incompatible foreign matter was contaminating our solutions. The search led rather far afield. Consultation with other clinicians and the reading of available literature on the subject brought a variety of opinions as to the cause of the trouble. Some contended that foreign material entering the solution from the rubber tubing was at fault. Some that caramelization or improper buffering of the glucose frequently employed was responsible. Others that dissolved chemicals from the glassware might induce the reactions, while faulty administration was blamed by some. The best evidence obtainable seemed to indicate that the contamination of the solutions by undistilled water was the most fruitful source of trouble, since it had been demonstrated that organic material contained in undistilled water, even if sterilized, was capable of producing fever and chills if intravenously administered.

It seemed, since there was no certainty in regard to the matter, that the reasonable course to pursue was to correct all of the possible factors, since any or all might be involved. First, then, careful control of the administration of intravenous treatments was instituted. In addition to the utilization of all precautions against contamination during administration, it was stipulated that the flow of fluid must be regulated as to speed. The giving of 1,000 c.c. of fluid was to require not less than 45 minutes. An attempt, too, was made to control the tempera-

ture of the solution so that it reached the patient at as nearly body temperature as possible. (This factor we have since come to consider as of less importance.)

Next we instituted the use of a properly buffered and non-caramelized glucose, prepared with triple distilled water and purchased in ampules from a responsible manufacturer. Special preparation of all materials with which the solutions might come in contact was now undertaken. This involved the use of heat resistant glassware, both for containers and connections, the employment of the finest grade of imported German parchment filter paper, of glassine paper rather than gauze for capping the solution flasks, and the careful cleansing and preparation of all needles and connecting parts. Further, a special technic must be employed for treating all rubber tubing to rid it of sulphur-carrying rubber dust and of any soluble material. (Detailed description of the methods employed will be found below.)

At this time we were using an ordinary single steam-operated still for the preparation of our distilled water. Inspection of this unit revealed the fact that when operating at high temperature it was quite possible for small quantities of undistilled water to be boiled over into the condensing tubes and thus enter the distillate. It would be necessary either to replace this unit with a triple still, in which the water would be thrice evaporated before being used, or to install baffle plates in our still to prevent this boiling over. The latter course was determined upon and the still rebuilt.

Thus the factors likely to have been responsible for the occurrence of reactions were controlled. A further step, which since has well proved its merit, was now taken. It was recommended that rectangular metal drums be provided for sterilizing and transporting the infusion and transfusion sets. These drums, once packed with properly prepared sets ready for use, could be distributed throughout the hospital, being readily transported without fear of breakage or contamination of their contents. Each such set was to be numbered and provided with a card, packed inside, upon which was to be noted the name of the patient for whom the set was used, the date and hour of adminis-

tration, the amount and character of the solution employed and whether the administration was followed by any untoward reaction. Thus was provided a means by which any failure of apparatus or solution could readily be traced.

Special provision was made to obviate any danger of confusing the various solutions provided for use in the hospital. Each solution flask had etched in its side and painted black the name of the solution contained in it. In addition, it was tagged with a special colored tag bearing the name of the solution and the date on which it was prepared. As an additional safeguard the boric acid solution was colored a light pink by the addition of aqueous fuchsin. To guard against possible deterioration it was also provided that all unused flasks of saline solution should be returned at the expiration of four days. Those which had been heated for use but were not required were to be turned in at once. The packed infusion and transfusion drums, when not used, were to be returned to the central supply room at the end of ten days for reconditioning and resterilization.

In order to carry out all these preparations satisfactorily a special room was set aside by the hospital, well screened against dust and provided with necessary work tables, sterilizers, and storage cupboards. Obviously, too, a well-trained and efficient personnel was a vital necessity. Two nurses were secured, well versed in the technical details of the work and thoroughly sympathetic with the aims and purpose of the central supply room. It has been due largely to their efficient and conscientious work that the project has proven successful. They have been aided by a maid and a practical technician who manages the stills and sterilizers.

The results of the various changes instituted soon became apparent in the greatly diminished incidence of reactions to treatments. During the period of 18 months since the institution of this method the following treatments have been given (July 1, 1933, to Jan. 1, 1934):

Intravenous infusions (saline, or saline and glucose)	5,409
Hypertonic saline and hypertonic glucose	417
Hypodermoclyses	515
Indirect transfusions	288
Total treatments.....	6,629

In the administration of these treatments there have occurred 21 reactions. This represents an incidence of between 3/10 and 4/10 of 1 per cent, a considerable improvement as compared with the 25 per cent previously occurring.

Each one of the reactions, as reported, has been investigated by the writer in an effort to determine its cause and rectify it. Of the 21 reactions reported 11 occurred in a three-day period shortly after the work was begun. By the method of investigation that the system of checking provided these were rapidly traced to their source—a minor contamination of the crystal salt by another substance in the process of weighing in the pharmacy. As a result of this incident (which accounted for almost half of our entire number of reactions in this year-and-a-half period) the weighing out of salt in the pharmacy was discontinued. The salt now is delivered in its sealed packages from the manufacturer directly to the central supply room where all weighing is done.

The success of this venture led naturally to a further expansion of the activity of the central supply room. It at once suggested the desirability of having all sets for various diagnostic and therapeutic procedures prepared correctly and uniformly by this same department. Previously these sets had been prepared for the most part on the wards, where complete standardization of method was impracticable. This step necessitated an agreement among the members of the attending staff as to the optimum make-up of the various sets and particularly a standardization of the types of needles to be used for various purposes. Once this had been accomplished, all sets were called in, and new ones made up by the central supply room for distribution, on requisition, throughout the hospital. Thus sets were prepared for the administration of gall-bladder or kidney dye, salvarsan, and so on, for performing phlebotomy, spinal puncture, thoracentesis, abdominal paracentesis, intramuscular injection, and for withdrawal of blood for Wassermann, sedimentation, chemistry, and other tests. (Detailed description of these sets and their preparation will be taken up later.)

Two distinct advantages were gained

by this arrangement. It was now certain that the sets provided for various purposes would be uniform, sterile, well-prepared, well packaged, properly labeled and containing the proper needles, sharp and in good mechanical condition. The standardization and centralization of their preparation also would make for economy of time and labor, and eliminate unnecessary odd items of equipment. Loss, breakage, and deterioration would also be minimized.

Such, in practice, has proved to be the case. This additional function of the central supply room has been demonstrated to be both practical and economical. In response to demand the various sets above mentioned, as well as the infusion drums and solutions, have been made available to the staff, on rental, for use outside the hospital.

On the suggestion of the director of the hospital's school of nursing a further step was now proposed. It had been the practice of the hospital to purchase gauze, cotton, and other dressing materials in bulk to be cut, folded, and prepared for sterilization by student nurses. While the materials thus purchased were relatively cheap, the method was expensive in labor and time. It was demonstrated, for example, that the preparation of the necessary sponges and dressings for one major abdominal operation would consume over two hours of nurses' time. With the constantly increasing requirements of the State Department of Education with respect to the nursing curriculum it was apparent that such loss of time by the students of nursing could ill be afforded. The alternative was either to employ non-professional help to prepare dressing materials, or to purchase dressings already prepared from the manufacturers. Careful investigation of the costs involved showed that the latter plan would be the more economical.

It was decided, therefore, to purchase for use in the hospital such prepared dressings, compresses, abdominal pads, sanitary pads, Dakin pads, cotton balls, sponges, packing, and other dressing materials of standard size and quality as might be required. These materials were to be packaged, sterilized, and distributed by the central supply room. The furnishing of sterile towels and the mending,

sterilizing, and distribution of gloves was also to be undertaken. This plan was put into effect and has now been in satisfactory operation for more than a year.

Below will be found a description of the various sets for treatment and diagnosis distributed by this central supply room, together with the directions to be followed in preparing them. The preparation of the solutions is also outlined. In addition, a rough schedule of the cost of operating the department has been prepared. During the coming year certain economies will be effected as the result of experience, as for instance in the matter of the infusion gravity jars. The breakage of these has been too great, and the cost entailed inordinately high. They are being replaced with a heavier, less fragile stock which should result in considerable saving. Steps, too, are now being taken to replace the rather expensive ampoule glucose with a product being prepared for us in our own laboratory. The expensive and perishable gutta-percha tissue, previously used for drains and surface dressings, has been replaced with cellophane, a satisfactory process for the sterilization and preparation of which we have worked out in our own department.

The centralization of materials and equipment in one department has thus permitted a closer supervision with a view to improvement and economy. It has localized the responsibility for the safety and adequacy of therapeutic materials and has furnished a means by which proper quality may be maintained. It is felt that the organization of our central supply room has produced tangible results in promoting efficiency and economy in time and labor, and has enhanced the safety and well-being of our patients.

Details of procedures follow:

Preparation of Equipment for Intravenous Boxes

1. Separate all parts of apparatus.
2. Soak tubing in cold water to remove old blood.
3. Wash all parts (glassware first) in tincture of green soap and phenosol or lysol solutions (3 ounces to each three gallon tub of warm water).
4. Rinse thoroughly with running tap water.

Distilled Water Used Exclusively for Remainder of Procedure

5. Soak in a tub of distilled water to rinse off all tap water, (glassware first). Rinse tubing with running distilled water.
6. Boil glassware in sodium hydroxide 1/8 of 1 per cent for five minutes. Lift out and stand to cool.
7. Boil tubing in same solution 5 min.
8. Have two tubs of distilled water in readiness and when glassware has cooled plunge into first tub of water for 20 minutes, then transfer to second tub of water for 20 minutes.
9. Drain glassware on towels. Do not dry with towels in preparation for assembling and packing boxes.
10. Tubing is rinsed with running distilled water when removed from sodium hydroxide and between first and second soaking to assure removal of any precipitate.

NEEDLES

1. Soak in green soap and phenosol solutions, as above.
2. Attach to syringe and force solution in and out.
3. Rinse with tap water, then rinse on syringe with distilled water.
4. Boil in sodium hydroxide 1/8 of 1 per cent for three minutes, pour off solution, rinse thoroughly and soak in distilled water for 20 minutes.
5. Syringe needles with distilled water, then soak second time for 20 minutes.
6. Remove from water, drain and syringe with ether. Drain or blow dry with bulb.
7. Examine all needles. Resharpen if necessary.
8. Thrust into gauze compresses (with stylets removed) for sterilization.

NEW TUBING

1. Cut in required lengths and soak in solution of sodium hydroxide 1/8 of 1 per cent for 24 hours.
2. Rinse and run tap water through tubing, then let soak for 2-3 hrs. Hang to dry.

Contents of Infusion Boxes

- 1 500 c.c. Gravity flask
- 1 Metal hanger with collar
- 1 Hemostat
- 1 Metal shut-off clamp
- 2 Gauze compresses 4 x 4 (one for saline flask—
—one for infusion jar)
- 3 Gauze compresses 3 x 3
- 1 42 inch rubber tube—large size
- 1 12 inch rubber tube—small size
- 1 Glass connecting tube
- 1 Glass adaptor for needles
- 2 Dressing towels
- 1 Hypodermic syringe with needle
- 3 Infusion { 1 No. 19 gauge 1½ inch } infusion
 { 1 No. 19 gauge 2 inch } deep veins
 { 1 No. 18 gauge 1½ inch } transfusion
- 1 Tourniquet

1. Line box with smooth finish towel.
2. Slide metal collar on gravity flask.

Connect large tubing and small tubing with glass connecting tube.

3 Put glass adaptor on other end of small tubing.

4. Connect tubing to gravity flask before packing box. Open vent slides for sterilizing.

Sterilize in Autoclave for 30 Minutes—20 Pounds Pressure

5. Close vent slides on removal from autoclave.

HYPODERMICOLYSIS

1. For use with infusion box:

- 1 Y glass connecting tube
- 2 Glass adaptors for needles
- 2 24 inch lengths small tubing
- 1 4 inch length large tubing
- 2 No 19 gauge $2\frac{1}{2}$ inch needles—(Needles for children's set, No 19 gauge 2 inch)
- 2 Metal shut-off clamps

2. Connect Y tube to small tubing. Put large tubing on stem end of Y tube. Glass adaptors attached to small tubing.

3. Wrap in double towels, then in outer envelope

Sterilize in Autoclave for 30 Minutes—20 Pounds Pressure

Gravity Flasks

FOR GALL BLADDER OR KIDNEY DYE, SALVARSAN, ETC.

1 Contents of envelope.

- 1 300 c.c. gravity flask
- 1 60 inch length pure gum tubing
- 1 Glass adaptor
- 1 Metal hanger and collar
- 1 Hemostat
- 1 Metal shut off clamp
- 2 No 19 gauge $1\frac{1}{2}$ inch needles
- 2 Compresses 4 x 4
- 3 Gauze compresses 3 x 3
- 2 Dressing towels

2. Wrap in double towels Then in outer envelope Label

Sterilize in Autoclave for 30 Minutes—20 Pounds Pressure

NOTE: Preliminary preparation of gravity flasks, tubing and needles for intravenous dyes or salvarsan is same as for intravenous infusions. Care should be taken to keep tubing from dye sets separated from infusion tubing.

Phlebotomy Sets

FOR INDIRECT TRANSFUSIONS

For use with infusion box—contents of envelope

- 1 Graduated bottle
- 1 Rubber stopper with 2 right angle glass tubes
- 1 Hemostat
- 1 2 c.c. hypodermic syringe with needle
- 3 Needles (donor's)
 - 1 No 13 gauge $1\frac{1}{2}$ inch
 - 1 No 13 gauge $1\frac{1}{2}$ inch
 - 1 No 16 gauge $1\frac{1}{2}$ inch
- 1 *Tourniquet*
- 2 Gauze compresses 4 x 4
- 3 Gauze compresses 3 x 3
- 2 Dressing towels
- 1 Glass connecting tube
- 1 Metal adaptor
- 2 8 inch length rubber tube

Syringes

Wash syringes with solution green soap and water. Rinse with tap water—then with distilled water. Drain on towels until dry.

CONTENTS OF PACKAGE WITH SYRINGES AND NEEDLES

30 c.c.

- 1 30 c.c. Luer syringe
- 2 No 19 gauge needles $1\frac{1}{2}$ inch in gauge
- 3 Cotton balls

20 c.c.—10 c.c.—5 c.c.

- 1 Syringe
- 1 No 19 gauge needle $1\frac{1}{2}$ inch
- 1 No 22 gauge needle 1 inch
- 3 Cotton balls

2 c.c.—(Intramuscular sets)

- 1 2 c.c. Hypodermic syringe—(Luer)
- 1 No 25 gauge needle $\frac{3}{8}$ inch
- 1 No 22 gauge needle 1 inch
- 2 Cotton balls

Sedimentation sets

- 1 2 c.c. Hypodermic syringe (Luer)
- 1 "Vim" needle No. 25— $\frac{3}{8}$ inch
- 2 No 22 gauge needle—1 inch
- 2 Cotton balls

Deep injection sets

- 1 5 c.c. Luer syringe
- 1 No 20 gauge 3 inch needle
- 1 No 22 gauge 1 inch needle
- 3 Cotton balls

SPINAL PUNCTURE SETS

- 1 Spinal needle No 18 gauge— $3\frac{1}{4}$ inch
- 1 Spinal needle No 20 gauge— $3\frac{1}{2}$ inch
- 1 2 c.c. Luer syringe
- 1 No 20 gauge $1\frac{1}{2}$ inch needle
- 1 No 22 gauge 1 inch needle
- 1 Dressing towel with 3 inch hole
- 4 Cotton balls

SPINAL MANOMETERS

- 1 Manometer
- 1 7 inch length tubing with glass adaptor.

CHEST EXPLORATORY SETS AND THORACENTESIS

- 1 No 15 gauge needle— $3\frac{1}{2}$ inch
- 1 No 16 gauge needle— $3\frac{1}{2}$ inch
- 1 No 19 gauge needle— $1\frac{1}{2}$ inch
- 1 No 22 gauge needle—1 inch
- 1 30 c.c. Luer syringe
- 2 c.c. Luer syringe
- 1 Dressing towel with 3 inch hole
- 6 Cotton balls

DIRECTIONS FOR PACKAGING SYRINGES AND NEEDLES

Separate barrel from plunger with gauze between. Needles in compresses—stylets removed Wrap in double towel—then in outer square—label.

Sterilize in Autoclave for 30 Minutes—20 Pounds Pressure

Solutions

Concentrated saline solution: Add 4,000 c.c. of distilled water to 32 ounces (907.2 gm) of (C. P.) sodium chloride. Shake well in bottle, filter.

Normal saline solution—(.85): Add 38 c.c. of concentrated saline solution to 1,000

c.c. freshly distilled water. Filter twice through parchment filter paper into flasks. Cover flasks with two sheets glassine paper. Bind with 4 inch muslin bandage.

Sterilize in Autoclave for 30 Minutes—20 Pounds Pressure

No vacuum. All flasks dated when removed from autoclave. Discard solution after fourth day.

BORIC ACID

Saturated solution—(4 per cent): Add one minim of aqueous solution Fuchsin 1 per cent to 1,000 c.c. boric solution.

Needles for Routine Use

Schick27 — $\frac{1}{2}$ "
Hypodermic25 — $\frac{5}{8}$ "
Sedimentation22 — 1"
Deep injection..... { 22 — 1"
 { 20 — 3"

(Also for local anesthesia, as in thoracentesis)

N. P. N.....19 — $1\frac{1}{2}$ "
Infusion19 — $1\frac{1}{2}$ "
Transfusion

Donor..... { 15 — $1\frac{1}{2}$ "
 { 13 — $1\frac{1}{2}$ "
Recipient..... { 18 — $1\frac{1}{2}$ " (indirect)
 { 15 — $1\frac{1}{2}$ " (direct)

Thoracentesis14 — $4\frac{1}{2}$ "
Chest exploration16 — $4\frac{1}{2}$ "
Lumbar puncture18 — $3\frac{1}{2}$ "
(short bevel,
45 degrees)
Clysis19 — 3"

Needles should be Vim or Erusto, preferably Vim.

Cost for One Year

350 BEDS

Dressing materials utilized in one year period.
GAUZE:

4 x 4 (pkgs. of 1,000) 237 (@ 6.60)	\$1,564.20
8 x 4 (pkgs. of 1,000) 30 (@ 9.)	270.00
36 x 36 (flat) (pkgs. of 1,000) 11 (@ 2.80)	30.80
18 x 18 (pkgs. of 1,000) 38 (@ 2.85)	108.30
DAKIN (pkgs. of 1,000) 107 (@ 3.80)	409.60
SANITARY (50 per carton) 2,000 Doz. (@ .09½)	190.00
COTTON BALLS (pkgs. of 1,000) 74 (@ 1.50)	111.00
BANDAGE STICKS: (6 Yds.) 3,500 (@ 31)	1,085.00

Total \$3,768.90

Labor in One Year Period

SALARIES (Plus subsistence):

Nurse, 140 x 12.....	\$1,680.00
Nurse, 115 x 12.....	1,380.00
Technician, 90 x 12.....	1,080.00
Maid, 58.50 x 12.....	702.00

Total \$4,842.00

Dressing materials \$3,768.90
Supplies, breakage, replacements.... 2,194.70

GROSS TOTAL \$10,805.60

(Overhead costs, including light, heat, gas, steam, etc., are not included, as they cannot be estimated with any accuracy for a single department within the institution.)

667 MADISON AVENUE

ANOTHER FLOATING MEDICAL CONGRESS

A floating congress of physicians will be held on the steamship *Columbia* of the Panama Pacific Line from July 18 to August 28 under the auspices of the Pan-American Medical Association.

The itinerary calls for a 10,000 mile cruise, during which scientific meetings in all branches of medicine will be held. Lectures will be delivered by distinguished members of the Association, which is the only medical society having a membership from all countries of the Western Hemisphere. Stops will be made at Nassau, Kingston, Curacao, Rio de Janeiro, Santos, Trinidad, and Puerto Rico. At Rio de Janeiro a five-day scientific congress will be held, and when the members of the Association disembark at Santos, Brazil, they will go to Sao Paulo for a three-day session.

Dr. Chevalier Jackson is president of the Association, and Dr. Joseph Jordan Eller,

director general. Dr. Charles H. Mayo is president of the section on general surgery; Dr. Harlow Brooks, general medicine; Dr. Charles Dennie, dermatology and syphilology, and Dr. P. J. Flagg, gas therapy.

Dr. Morris Fishbein, Editor of the *Journal of the American Medical Association*, will be among those who will accompany the congress-cruise to Brazil.

An appropriate setting was given to the dinner celebrating the fortieth year of Dr. Hermann Grad's service at the Woman's Hospital on March 18 by holding it at the Waldorf-Astoria, which stands on the site formerly occupied by Woman's Hospital, Fifth Street and Park Avenue. Dr. Grad began his services there in 1896 as an intern. He was given a silver bowl, suitably engraved, as a memento of the occasion.

PROBLEMS IN DIFFERENTIAL DIAGNOSIS

Report of Three Cases

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NEW YORK CITY

The present article is designed to present a few typical case histories in which the problem of differentiation between psychogenic and physiogenic types of illness presents itself. It is our purpose to present some of our criteria in making these differential diagnoses in the hope that we may help effect a closer working arrangement between the workers in other branches of clinical medicine and the psychiatrist. From our point of view this is particularly important, for we find that if an individual with a psychogenic background for his symptoms is treated by purely physical measures these often serve to fix the patient in his belief that he has a serious physical ailment and tends to make him much more inaccessible to psychotherapy. On the other hand, if we psychiatrists miss out on the diagnosis of physical disease or neglect its importance, the results are even more disastrous.

Several points, which may be relative to these case reports, were made in an article by Gillespie, which appeared in *Brain* in 1928. He says the differentiation is not precisely the same as the differentiation between "organic" and "functional," for psychogenic and physiogenic factors may be intermingled. Therefore, the following points, also, seem of importance in making the differentiation. First, of course, comes the nature of the physical signs present. Next, the type of history of the illness, and particularly the setting in which the symptoms first occurred—what is commonly known as the precipitating factor. These factors are not always easy to elicit, but are most valuable if they can be determined, not only as an aid in differential diagnosis but also in treatment. Very often there is a direct relationship between the onset of the physical signs and an emotional situation. The patient may be aware of both though failing to

see the connection. Third, we should consider the personality of the patient, also his mental attitude toward the symptoms and signs, whether it be a bland indifference or an extreme solicitude. Finally, we can sometimes find evidence of a neurotic purpose that the illness serves.

CASE I. A white, married woman of 30, engaged in a profession, came to the clinic first in the spring of 1934. She had complaints of palpitation, difficulty in breathing, weakness, a tendency to flush easily, extreme apprehension, and nervousness. The symptoms had been present for nearly two years.

The patient was born in New York. Her birth and infancy were in no way unusual. She had a pleasant childhood, marred only by nervous upheavals in one of her parents. Her progress through school was uneventful. She had no serious illness in childhood, adolescence, or young womanhood. She began her professional career at 18. At first, she held a very minor position, but her driving energy has carried her forward fairly rapidly so that today she holds a responsible position.

She married at 26. Her husband turned out to be an obstinate, poorly adjusted person who made life miserable for his wife. He showed a well-developed streak of cruelty; there were frequent and violent controversies. Finally, after a particularly violent argument, the patient walked out on him. She tried to compose herself with numerous cups of black coffee. This only served to increase her tension and distress. Later in the evening, while still very emotional, she had her first attack, with extreme palpitation, weakness, hot and cold flashes, and great apprehension. From that time on she has had more and more attacks of the same type, usually precipitated by conflict with the husband.

She consulted various medical men about her condition. Her own family physician, who knew a good deal about the total situation, considered the attacks "nervousness." Other specialists gave her varying diagnoses, including heart and thyroid disease. Eventually a basal metabolic estimate was made,

Read before the Section on Medicine of the Academy of Medicine, January 15, 1935

with the finding of rates varying between +30 and +38. The surgeon who had ordered these tests was not reluctant to diagnose the condition as Graves' disease and advise surgery. This diagnosis was corroborated by another surgeon, who advised against operation.

The patient continued to feel an increasing anxiety concerning herself, until she consulted an internist who obtained an accurate picture of her whole life situation. He decided she had no thyroid disease, and referred her to us. In the meantime she had separated from her husband but continued to see him at intervals. This served to set off further attacks. Others were initiated by her anxiety about her own physical condition.

On examination in the clinic, she showed no exophthalmus, no tremor, the thyroid gland was not palpable, the pulse was over 100, after a rest period of five minutes. There was much flushing. The patient was taking much sedative medication. She was extremely apprehensive, tense, and rather depressed. It was only with great reluctance that she discussed her marital situation. She was disposed to look upon her difficulties as being entirely physical. She was anxious that a thyroidectomy be done, for at least "that would be something positive." She felt she could go on no longer as she was, and she was skeptical of the value of psychotherapy. Though she came to the clinic for that type of treatment during the next six months, there was often much rebelliousness about facing her difficult situation, yet we made enough headway so that gradually she began to accept the possibility of emotional factors as being important.

She was urged to accept a somewhat more hygienic way of life. She curbed her extreme drive in her work so that she had more rest, and more outlets in the way of recreation were suggested and accepted. Much reassurance was given regarding her physical state. At the end of six months' period, she was able to see her husband without reacting with emotional upheavals, was handling the situation more objectively, was off drugs of any kind, and her basal metabolic rate was below +5 on three occasions.

In this first case, the patient presented signs that were sufficiently striking and typical of thyroid disease to lead various specialists in that field in making such a diagnosis. Yet as she presented herself to the consultant who sent her to us, and to us, there seemed to be a certain indefiniteness about some of those signs.

Her history disclosed a fairly definite connection between the onset of the initial symptoms and a most trying emotional situation. She had a good personality except for the tendency, present particularly since her marriage, to drive herself too hard. She showed a rather striking attitude toward her symptoms, with her stubborn resistance to accepting any emotional background for them (apparently in an effort to avoid facing the difficulty of her marriage). Her incessant demand for surgery was also rather striking.

CASE II. A white, single, automobile mechanic of 32 was referred from a medical clinic in the Fall of 1932 with a history of stomach trouble that had been present for approximately 14 years. This ailment consisted of gaseous belching, vomiting, and discomfort after meals.

This patient was also born in New York City, the fourth of 6 children. His father was steady, hard-working—"not like myself," were the patient's words. The mother was greatly attached to the patient and oversolicitous. His siblings have all done fairly well, have married and established homes. Patient denies any neurotic characteristics in childhood. He left school at 14, loafed for a time, then shipped as a sailor for one trip. Later he worked irregularly as a tinsmith, garage mechanic, and chauffeur. Though he held a wide variety of jobs, none of them was ever held for very long, and much of the time he was dependent or semi-dependent on his parents or siblings. He has never married because he "never got around to it."

At about 18, he had his first gastrointestinal symptoms, of the type described above. His family physician believed he had a chronic appendix; this was removed. We have no report of the findings. The symptoms were unaffected except for a gradual increase in severity. There were periods when he vomited after practically every meal, yet he never lost an appreciable amount of weight.

At about 22 he began his attendance at medical clinics, was treated in the first for three years with no particular effect on the symptoms. When at 25 he shifted to a new clinic, he complained of heart burn relieved by food, again of vomiting after each meal, and of persistent belching. At times, he said, he had pain in the epigastrium, occurring about 15 minutes after meals. His bowels were regular.

Physical examination revealed nothing striking. The first impression was gastric ulcer, but a gastrointestinal series showed

essentially nothing except visceroptosis. During the next seven years he was in and out of that clinic with practically the same complaints. He was treated with a bland diet, alkalines, bromides, and so on. Repeated gastrointestinal series were negative. On April 1, 1931, he was still bringing up mouthfuls of food after every meal and occasionally the entire meal. At this time, the physician noted: "We have been unable to find any organic basis for the patient's symptoms. We believe they have a neurogenic basis. Advise treatment by a psychiatrist."

So he came to us. Giving the impression of being rather dull and placid, he showed no fundamental concern about his symptoms and accepted them over-easily. After one or two visits, the rapport was much improved and the appearance of dullness was not so marked. He was asked to recall, if possible, the first occasion on which he had any gastric symptoms. He stated that in 1918, while he was employed in the shipyards, he and another man were working in the double bottom of an old oil boat, and the work gave him some anxiety because he feared that he might be overcome by oil fumes. However, he stuck at his job and was doing well. Just before going to lunch one day, the other man made a serious mistake in their work. When they returned from lunch they found the boat about to founder. The patient became excessively upset, cried, and vomited his lunch. He dated the development of his symptoms from this time.

At the conclusion of the interview in which the above story was obtained, the patient came back into the office just after leaving. With much belching and considerable emotion, he said that the men at the garage where he worked twitted him about his lack of success with women. He asked to be allowed to discuss that question at his next visit. When the visit arrived he discussed his great conflict over sex. Again the interview was punctuated by profound belching. He said he had been worried about this question ever since adolescence. Simple explanation and reassurance gave him relief. Following this, the opportunity was taken to give him reassurance regarding his gastrointestinal symptoms. He saw the connection between his fears and conflict and the symptoms. Gradually he was able to eat more boldly, and after about six weeks he gave up medication for the first time in many years. He was working more regularly, and at the end of a six months' period was still doing well.

In this case nothing much is to be

found in the way of definite physical signs. Again the story of the onset was linked with an emotional situation, but not by the patient until we elicited the history of the setting in which those symptoms first occurred. He came to see that his anxiety about his sexual situation served to make the symptoms persist. His personality was not nearly so good as that of the patient in the previous case. His willingness to accept a rôle of dependence and invalidism was striking. His attitude toward the symptoms was one of indifference. His persistent visits to clinics fitted in well with the pattern of wanting to be cared for and mothered. The illness seems to have had, at least to some degree, that purpose.

CASE III. A married housewife, 37 years old, was referred to us by a physician in general practice because he could not understand the basis of her many and varied physical complaints and worries.

This case history presents a somewhat different problem.

The woman was obsessed with the idea that she might have cancer or syphilis or a gastric ulcer. She had much abdominal pain, at times, diarrhea, and complained of pain in her back that radiated down into her legs. There was much headache. In addition to all these difficulties, she was in a state of anxiety and depression most of the time. Doubts beset her whenever she had to make a decision. Social affairs and even meeting friends on the street were ordeals. She was very dependent on other people and particularly on this doctor. He could find no physical basis for all of these complaints and finally sent her to the Psychiatric O.P.D.

The patient had been brought up in a home with much material comfort. The mother, a strict and narrow person, had instilled into the patient a very prudish attitude. This woman dominated her children and also her husband, a kindly, gentle man.

The patient had been a robust, athletic child, with no serious illnesses in childhood or early adolescence. Menstruation began at 13; she was not prepared for this, and attempts to gain understanding of this phenomenon and of the whole sexual problem that she had to face were rebuffed by her prudish mother. During this whole adolescent period she had many worries. At 16 she went away to school but was given little understanding or help by the

school authorities. However, the underlying tension and anxiety were somewhat eased by the physical exercise.

At 17, she was operated upon for appendicitis. Afterward she was skeptical about the necessity for this and tended to link her later symptoms with the preoperative ones.

At 22 she married, and at 26 she went through her first pregnancy with no great difficulty. She went through a second pregnancy at 30 in which the baby died soon after birth. She began to fear that in some way she was to blame for the child's death. The prospect of future pregnancies made her apprehensive. From the time of the second pregnancy, her fears and physical complaints started to elaborate until they grew to the point described above. She haunted the physician's office, withdrew from all social contacts, and came to feel she was a burden on her husband and a poor mother to her child.

She considered herself neurotic but still she was obsessed with the possibility that she might have some physical disease. Her doubts drove her back to the physician over and over again. Her attitude convinced the physician that she was neurotic.

When she presented herself at the clinic she was obviously heavily loaded with anxiety and had many phobias. In addition she had some complaints that could be explained on the basis of definite physical pathology. We found that she did have definite pelvic abnormalities, including a third-degree retroversion of the uterus, a cystocele, a rectocele, and a chronic cervicitis. She had a posture caused by improper shoes that was producing lumbosacral strain. She was found to need glasses. After a few visits she was able to ask some of the questions about venereal disease and kindred subjects that had been troubling her so long. This served to lessen some of the anxiety in that regard. A change of environment for a couple of months had beneficial results. She has had no pelvic repair as yet, but the other corrections have been made. These have served to alleviate some of the gastrointestinal difficulties and the pain in the back. She is definitely improved but still neurotic.

The facts disclose an indefinite history of onset of the symptoms. The patient herself dates the gastrointestinal group back to the adolescent period and believes her present troubles in that region are of a similar type. Apparently she had a considerable interval in which she was relatively free of these and other symptoms, only to have them appear once more in association with her fear of pregnancy. She is a definitely neurotic personality. There was acceptance of the symptoms as neurotic whenever she was in a situation where she felt reassured, but there was a prompt return of her fears of disease as soon as she was alone again.

The whole picture was so confusing and involved that it would be impossible to say that all of her symptoms were not of psychogenic origin without repeated careful medical examinations. The complaints of an individual who has been labeled neurotic are occasionally not given so much consideration as they should receive. One forgets that they may develop a physical disorder in their neurosis and, as a consequence, all their complaints are considered neurotic. This is probably what happened in this case and it is cited for that reason.

Comment

It is our impression that cases of the type given above are on the increase in all clinics and in all branches of medical practice. The problem of differentiation has become a very practical one. In my experience, at least, the differentiation on the basis of physical signs alone is easy only in certain cases that appear in the neurological clinics. In the great majority of cases, the criteria cited above will prove of assistance, with particular attention to possible precipitating factors.

525 EAST 68TH STREET

DR. GOLDWATER TO ENFORCE EDICT

Dr. Goldwater, Commissioner of Hospitals, has announced that he will enforce his edict of some months ago banishing all physicians who have private practice from acting as admitting physicians at the various municipal institutions. His order to the hospital superintendents to replace such doctors has not been carried out in some of

the hospitals, the Commissioner recently intimated.

"My objections to admitting physicians who are engaged in private practice are obvious," Dr. Goldwater said. "Their activities at the hospitals are bound to conflict with their outside work and the hospital duties invariably suffer."

WHY SOCIALIZED MEDICINE IS INEVITABLE

MORRIS ROSENTHAL, M D

NEW YORK CITY

There are certain events that we are compelled to accept. Much that has happened since 1929 may safely be put into the category of events we have to learn to accept, whether we like them or not. Regimentation, standardization, the extended manipulation of social elements and social forces by foundations, the assumption by Federal and State bureaus and individuals, of activities formerly in the hands of private individuals or groups—all of these are events we are compelled to accept. Some of them may be desirable, some of them may not be desirable, but the sweep of events carries us with them, and we can only take our appointed places in the scheme, and hope for the best. But there is one impending event that affects us as physicians more nearly than others, and that is the probable introduction of socialized medicine into the social picture. I propose to show that socialized medicine is not only probable and imminent, but, yet another inevitable event that we shall be compelled to accept.

The medical profession is moved to resist socialized medicine, for perfectly sound reasons—sound, as all large mass resistance is sound, because based upon a higher logic than logic itself, because it is rooted in essentially right and instinctive feeling. We want our abilities to count for us as individuals, we believe that, as individuals, we can function best in the interests of our patients. We don't want to be subordinated to the uses of bureaucracy, we don't want to be told how many visits to make, nor what drugs to use, we don't want to be subjected to the supervision of underlings enjoying the confidence of their superiors in office, we don't want to punch timeclocks, and so on. Further we believe that anything that destroys the individual relationship between doctor and patient is bad for the patient and bad for the doctor. As Dr. Brooks said recently, "The patient is not yet cured after we have given him the aids of laboratory and pharmacopeia. He does not get well until we have treated his mind as well, until we have soothed it out of fear, and stimulated it into re-

newed confidence and hope." This cannot be done by a medical clerk.

All of these are reasons based on feeling and experience. There are other reasons why we oppose socialized medicine, that are more nearly rooted in reasoning. In a community where private property rules, we feel it unjust that the practice of medicine alone should be socialized. Such a proceeding amounts to discrimination against a group, that shuts off opportunity, and limits that expansion of the spirit without which human enterprise fails, and human initiative is destroyed. It has been rightly said that great discoveries have been made by individuals working alone, not in bureaus. Further, doctors will resist being ordered to localities in which they are strangers, for no other reason than to effect a redistribution of medical service. They want to be free, with their wives and children, to make their associations and friendships where they please, not to be ordered like army officers from pillar to post.

Doctors point to compensation work which is a form of socialized medicine to demonstrate how unpleasant and how unsatisfactory socialized medicine can be. The doctor may at any time become exposed to charges of incompetence, racketeering, falsification of certificates, overcharging, and so on.

And there are still other reasons cited to show the disadvantages of socialized medicine. Doctor Welker in his inaugural address before the Medical Society, County of New York, stated that of the 90 per cent of the people who are in a low income group, only 45 per cent become ill, and of these, only 10 per cent have illnesses of sufficient gravity to impose heavy financial burdens. It is obviously then unfair to tax 100 per cent of the people for the care of only 10 per cent.

Again, morbidity and mortality have, we are told, increased greatly in those countries in which some form of socialized medicine is practiced. Pay for doctors in those countries where socialized medicine exists is insufficient. Even

in the case of fulltime workers, doctors must find some way of adding to their incomes, by whatever outside practice may be had. In Germany, where the doctors per person are not nearly so numerous as in this country, doctors apprentice themselves in the *Kranken Kasse* without pay, until such time as a vacancy occurs through the death or retirement of a member, whereupon all the apprentices try to get his position.

We believe that in this country which has never had socialized medicine as such, the people have had better medical care than that given to any other people of like financial and economic status.

Well, there is the case, in brief, against socialized medicine. And yet, I maintain that socialized medicine is bound to come, in spite of the doctor, whether we like it or not, whether it is desirable or not.

First, a few necessary facts: 80 per cent of the people of this country are earning less than \$2,000 a year. Of this amount, when budgeted, only ten dollars or less may be allotted for medical care. The average for medical care in the industrial policy class is about \$60 a year. Out of this must come the occasional fee for the doctor, dispensary charges, the cost of drugs and counter prescribing in the drugstore, the cost of proprietary preparations, and so on—items which the small income cannot stand, now less than ever. The people of the community are coming to expect that medical care is something to which they are entitled, that it is the duty of the State to see to it that their health is maintained. They will pay the doctor when they can afford it, but they expect and feel entitled to medical care, even when they can't pay for it. This throws the burden on the doctor, who can no longer afford to carry it.

Does the doctor refuse to give medical care, even if he would? The reasons why he cannot and does not, are too obvious to enlarge upon. He takes on the burden, takes it on unremunerated, while his own bills remain unpaid. But the profession cannot continue to carry this burden. Manna does not descend from Heaven, nor has Providence so far shown any inclination to provide. What then is the answer? The sick, who cannot afford to pay, must be cared for. The doctor, who, in common with his patient, has to

live, must have the means by which to do it. Is it not inevitable that the State will have to step in, and devise some way by which the sick shall get the care they need and cannot pay for, and by which the burden of charity shall be lifted from the doctor, who can no longer afford to carry it, and be maintained by taxation?

The forces in our capitalistic state that are inevitably pushing us toward socialized medicine may be classified under three heads: First, there is the necessity for keeping the workers contented. In normal times we saw industry building model homes for the worker, sponsoring co-operative buying, and so on—all of them measures to maintain the morale of the worker, to keep the pressure upon him within safe limits. As for medical care, where it was not provided for in the co-operative scheme, the worker was generally able, with the help of clinics, free hospital service, and so on, to get by. But now, the burden of illness cannot be met at all, and it provides as a result of severe economic pressure the straw that breaks the camel's back.

This brings us to the second force operating in the production of socialized medicine—the increasing demands of the workers themselves. And they dare not be ignored. In the main, workers are self-respecting, their morale has not yet been broken down, they do not become willing recipients of charity. They know that by collective action or pooling of funds, or by insurance, they can make provision against financially burdensome illness. To these people, and they constitute a very large majority, socialized medicine would be welcome. Perhaps they are aware that thus they help to maintain capitalism in the saddle. Yet, even though they may resent the rapacity of the capitalistic scheme, they are not yet ready to destroy it at the cost of even comparative contentment. Whereupon it becomes necessary to add to the "bread and circuses" of capitalistic society the further sop of medical care.

As to the third force that is bringing in socialized medicine, i.e., the incorporation into the political platform of some form of socialized medicine, which must, of course, enlist the services of the medical profession. The politician, in the pay of capital, is under compulsion to present

for the consideration of the workers who must be kept safely under control some way of providing medical care that shall be satisfactory to them. The people as a whole are having a bad time. Those who are in power want to remain in power. And socialized medicine has been used before as a lure by politicians, even before the time of Bismarck.

Should I be pressed to indicate still another force pushing us in the direction of socialized medicine, I should say, the desire of a large part of the medical profession itself, which sees no other solution for its economic ills. At the time of our greatest prosperity, a census taken of 1,800 doctors of this city, showed that 40 per cent of the physicians who had been in practice from 5 to 35 years, had a gross income of less than \$3,000 a year. What the condition of physicians is today, I do not need to discuss. Many doctors have come reluctantly to the conclusion that socialized medicine means at least economic security.

Socialized medicine is not so long a step for the profession to take. There are already laws to provide pay for the care of the sick poor in other than cities of the first class. And the state has long taken care of the tuberculous, the mentally ill, of contagious and genito-urinary disease. Examination of school children, periodic health examination, prophylactic medicine, public hygiene, the water supply—all are under the aegis of the state, as are many more health duties.

The step toward socialized medicine is not very far nor new nor strange. It is one part of a great social movement, and will be swept into being along with other similar social reforms that may not seem desirable, but are a stage in the evolution of still other movements.

Since this change is inevitable, we should carefully examine all the reasons that have been advanced against it. Some of the defects are such as may be eliminated, others are inherent in the scheme. In a mass system, there is bound to be a measure of regimentation. It would be impossible to give medical care to the people of this country, for which payment is made from some central source, without the necessity of a central bureau. How burdensome these bureaus are to be depends upon us. If we take an active

part in the changes that are impending, we may create conditions of medical service that will be beneficial to the patient and fair to us. If we lie down and let the politicians walk over us, then we will suffer, and so will our patients. Whether free choice be possible, whether individual treatment be possible, I do not know, but these questions need not present insurmountable obstacles.

Socialization of medicine under a capitalistic system may be unfair, but if the community wants it and it can be shown that it is to its advantage to have it, it will come. The public will have its doctors, as it has its teachers, its policemen, its firemen, and so on. So far as the research worker, and individual initiative is concerned there is no good reason why the state, as well as privately endowed foundations, cannot provide the complicated and expensive equipment these entail.

We must be prepared to dictate terms when the change occurs. We, the medical profession, must be able to present a plan in detail that will give medical care to the people and a square deal to the doctor.

It has been said that the work of the CWA and the Home Relief is an indication of what socialized medicine is like. The ridiculously low fees paid by the government to physicians, the limitations on the number of visits he may make, the elimination of all but the simplest drugs—these and other restrictions have been cited as a sample of what socialized medicine will be like. But I say this is what happens when the government is under compulsion to provide medical care, and organized medicine does not plan nor help. The attitude of organized medicine, when it was not indifferent or merely academically interested, was one of actual opposition. The government bureaus that were established had as their heads lay people who knew nothing about medical care except in a general way. Without the guidance of medical men and without a carefully considered plan, they created their own conditions, conditions that we resent at present.

Shall we propose a carefully considered plan of socialized medicine, or are we to fight among ourselves and let outsiders come in and tell us what to do?

INDIVIDUALISM AND MEDICINE

HARLOW BROOKS, M.D.

NEW YORK CITY

A great change is taking place at this time in our country. On every hand the tendency is to centralize and standardize many of our activities and to vest in the central government powers which have up to now resided in the individual and the locality.

Concerning this tendency Newton Baker in a recent number of the *Atlantic Monthly* has written:

The pioneer spirit, prime factor in the making of the United States, was intensely individualistic. The concept of the State was that it should protect the individual, and so, by freeing each to develop his highest capacity, multiply the varieties of men, and capture for the common good the achievements of the most imaginative and valiant persons. Whereas we hear nowadays that the individual is nothing and that the State is all, liberty used to be regarded as the chief good. Restraints on it were always narrowly scrutinized. Now we are asked to substitute equality and put up with such leavings of liberty as do not stand in the way of complete equality.

These remarks most aptly epitomize the dominant feeling of the medical profession toward those tendencies which are now so evident on the part of the politician in his well financed fight against the independence of our practitioners.

A recent editorial note, published under the heading of "Friendly Medicine Needed" in one of the greatest journals of America, reads:

How will it be with socialized medicine? Will it have a good social time with its patients, or will it tend to become cold and impersonal and institutionalized, as people not rarely complain of public health service even now.

For the present system of rugged individual doctors it is to be said that the family physician has been always greatly valued for his pleasant bedside manners. The scientific practitioner might sneer, but the psychologists have been discovering that there was a good deal in that "bedside manner." It provided that human fellowship and homely cheer for which many sufferers now flock to the cults and near-religious.

There can be no question but that there is a tendency throughout the entire world today to do away with individualism and to substitute therefor standardization. Motor cars are turned out from the shops today in great quantities, all theoretically absolutely alike, one just as good as another, one just as bad as another. Then why may not doctors be manufactured in precisely the same way? But even with the motor cars a certain degree of individualism will persist, even with this highly mechanized product. Some of them are very bad, most of them are of passable quality; a very few of them are very good. So it is with the typewriter, with guns and lathes, with pencils and with locomotives. Doubtless saxophones may be produced in like manner, but violins, never. They require the art, the genius, love and the individualism of the master's hand.

Photographs are for the most part standardized, that is, all except the good ones, but works of art are never standardized, nor can they be if they remain works of art. It is now again proposed to standardize men, scientists and artists. This was once the idea of a certain school of military practice, but it was soon found that the soldier who was but a cog in a machine, failed when he came in contact with those who were trained to act and to think for themselves.

The attempt to standardize men in all their relations was the object of the Soviet States. But the Russia of today has become the greatest outstanding example in the whole world of dominating individualism on the part of a few. The ruling class in Russia of today is much smaller than in the days of the Czars, and of the nobility. They have the largest standing army in the world to enforce standardization and the head of its ruling group reigns a despot who puts to shame the authority and power of the most domineering of the Czars, all of whom at least admitted that a God ruled over them.

Naturally there has been in many places a reversion against this desire for leveling

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mediocrity which must necessarily persist and control or preponderate in standardization. Certain peoples have flown to the opposite extreme. Mussolini and Hitler typify this reversion and from what I have seen of the proponents of standardization each of these also secretly hopes that he will be the strong man to dominate and control the standardized robot human.

And it is now proposed to standardize medicine and medical practice. Some of this group of propagandists are doubtless well meaning, honest men, hoping for the best for mankind. But they are woefully ignorant, particularly of medicine, and its requirements, practice, and history for the greater part. Naturally, with few exceptions they are not even graduates or students of medicine, though all too anxious to seize upon the title of doctor probably in the hope of deceiving others and perhaps even themselves. Few indeed of them have won a place in the practice, science, or art of medicine, however clever their political acumen may be. They may, however, well merit the title of Doctor of Politics.

A study of medical history might not come amiss in this relation. The early history of medicine falls into periods each of which is known for a strong and productive individual whose personality and teachings were powerful or brilliant enough to give name to a particular school of practice. Thus there was the Hippocratic school, the school of Galen, and so on. When the medicine of the early days is considered it is readily apparent that the outstanding individuals for whom the schools are named without exception each added something of real value to the medicine of the day.

On the other hand those physicians who abjectly followed the lead of the great masters contributed but little or nothing to the progress of medicine unless they too became individualists and created new schools of practice and thought themselves. Even in those days advance was the result of individualism—not the stasis of schools or guilds.

Modern medicine has entirely discarded this idea of the schools. No longer does one hear of the schools of Virchow, of Koch, of Delafield, of Janeway, or of Osler but one does know these names

and many others because of the great incentive and impetus which they created in the science through their intense individualism.

Even medical institutions or colleges are now known because of the individuals who have created or worked in them rarely for any other reason. Johns Hopkins is great because in that university worked Welch, Osler, Halstead, Howell, and Abel. Every important hospital or clinic is outstanding by virtue of similar associations. Even those who conscientiously imitate and attempt to follow the great outstanding figure heads of medicine are forgotten in their imitable imitation and honest effort, because they have aimed but at a standard already attained, not at individual advance.

In the field of medical discovery the dominance of the individual is even more certainly demonstrated. There are throughout the world today many institutions of medical research, groups equipped with every opportunity and facility for the production of the best of work. What great additions have they made to medicine, to compare with the discovery of the simple chemist, Pasteur, or with that of the obscure country practitioner Robert Koch? In our own Americas the same has pertained. Call to mind the discovery of insulin, the elaboration of the liver treatment of pernicious anemia, the cause and control of malaria, the mastery of yellow fever, of typhoid, of hookworm infestation, all the work of individuals, and most of them working under unpropitious conditions.

Indeed it would be a very difficult task to cite even one or two major discoveries of maximum value to the science or art of medicine which has emanated other than from the isolated effort of one or a few outstanding individuals. Yet, continually preachments are uttered that much more could be accomplished if standardized research workers were better trained, organized, and properly controlled. It is no less logical to prescribe the same methods for the development of Bachs, Wagners, Beethovens, Sarasates and Kreislers. Incidentally such institutions as I have mentioned do exist, but what have they produced? What indeed as compared to the productions of many individuals throughout the entire

world, working independently, but with the divine spark of genius?

The profession of medicine entails many responsibilities and few privileges. The former are certain to undergo no diminution in the future and apparently the latter only are to be regimented or eliminated. Certainly one of the greatest privileges of the practice of medicine is that in it, great personal liberty is not only permitted but encouraged. The physician is still permitted and expected to administer his best service without supervision by any, to treat the poor as he would the rich, to give the same sympathy to the wicked and to the righteous. Even in time of war he is not only allowed, but expected to treat the sick and wounded enemy, as but another suffering human being. These are impossible conditions if designed to be controlled in the mass, by regimentation, and by unsympathetic lay and political supervision. What would the practice of medicine be without these beneficent practices, and how bitterly would we resent restrictions in these respects. Yet it is not we but the sick and humanity in general which most benefits because of them.

Even the most enthusiastic uplifter who has discussed these questions, almost without exception—probably because he has himself been sick—admits the desirability of the individual patient being allowed to select his own practitioner. He has even occasionally admitted that better results are obtained when the physician knows of the person as well as of the case. This inconsistent attitude on the part of those otherwise amblyopic persons is probably accounted for on the personal experience of their own illness, and because when in this condition they feel the need of a sympathy and understanding beyond that extended to a guinea pig or to another mere problem in science. Without the humanitarian and personal element medicine can never meet with full success, a fact universally admitted, and yet one entirely impossible of fulfilment under elimination of the individual in the practice of medicine. Salmon has well said that no case is cured which does not feel itself cured, and no body is healed whose spirit and mind are not also put at rest.

Such relationships are, of course, en-

tirely incompatible with the standardization and political control of the practice of medicine. Attempts at impersonal, though perhaps highly scientific practice in dispensaries and hospitals, show this fact only too clearly. It is quite certain that the elimination of individualism and personal understanding in the practice of medicine will eliminate also all save mere scientific contacts. It must inevitably remove from practice much or most of the art of medicine, which, desirable or undesirable, still makes up a very considerable part of medical success and practice. It is perhaps conceivable that advanced and successful methods of teaching and training may sometime permit a standardization of scientific training. It is utterly impossible, however, to assume that the intuitions, the feeling, and the understanding of the artist can be standardized or even developed in this way. Yet it is in these peculiar properties that success or failure in practice most depends in any practitioner. We have all of us known brilliant students, highly trained and highly competent, who were, nevertheless, entire failures in the application of their scientific knowledge to humans, because of their lack of an understanding of humanity, and their failure to comprehend the art of medicine. This requires necessarily keen observation, sympathy of understanding, and a vast knowledge of the imponderable which makes up so large a part of the practitioner's armamentarium. These are all individualistic traits.

While this need of individualism is so obviously necessary in the practice of medicine, it is equally demanded in research. The investigator without a power of imagination which is often spoken of as of intuition, no matter how trained in science alone, becomes but little better than a mere technician. It is the dream of the true investigator, the conception founded on understanding and inspiration, more than on mere scientific knowledge, which often points the way of the true research worker.

To most physicians independence is not merely a desideratum: it more nearly approaches a necessity. Subordination, a quality absolutely necessary to standardization and regimentation, has never characterized the physician, medical science,

or the creator in any field. Indeed, it is the great liberty and independence which has in the past characterized this profession that attracts to it most of its true disciples. Remove these possibilities from us and automatically those to whom liberty of action and thought means much will certainly seek other outlets for their efforts.

A survey among those whom are most respected and admired—all who are successes in their profession—not necessarily as to financial success, though probably on that basis also the same elementary evidence will be found—will indicate that almost all are men of individuality. They are men resentful of the curb and whip of management, particularly of lay management, which seems also to be one of the desiderata of those who would standardize medicine and regiment its practitioners.

Thus far the modern tendencies in medical education have been devised to increase individualism in medicine. In the old days teaching was almost without exception largely, sometimes almost wholly, by didactic lectures to large classes. In the modern medical colleges, classes are small and the tyro is taught to think and to observe for himself, and particularly to develop his own powers of reasoning and deduction. We are most certainly teaching our young doctor altogether wrong if we are preparing him for the standardization which our would-be masters and dictators appear to desire. If the individual is to be eliminated, a standardized robot will certainly take his place.

The whole requirement of medicine implies, not a detailed mathematical or mechanical understanding, but the ability to correlate the very complex integration of processes involved in biological fact. The physician and the investigator in particular must be no more chemist than physiologist. He must be a man with mechanical comprehensions, but he must also know and practice each hour of his professional life, psychology, and philosophy. There is no branch of the humanities, which he is not required to comprehend if he would be a well-rounded and fully-efficient man. He must even know the processes of dishonesty, the ideas of the criminal, the qualities of

evasion and self-seeking if he will understand, as he must, the variability of human action and the ways of the bent mind, as of the crippled body. Each of these features demands not standardization but individualization, not the development of subordination, but of leadership and independence. These make up the individual and not the robot, the creator and divinator, not the mere technician.

There is, and I do not deny it, a need in our profession for the technician. As our problems of diagnosis and of treatment become more and more complex we need the men who can do perhaps but a few complex things exceedingly well—so well and so delicately that constant training and practice is required, as inveterate as that needful for a piano tuner or a watchmaker. These qualities, however, are not necessarily those of a physician, but the work rather of those subordinate to the physician: We require Paderewski, and also the piano tuner.

Until patients cease to be people and become but mechanical contrivances the successful practice of medicine will demand the individualist. Until we deal with clients without emotions, without cerebration, without likes or dislikes, without physiological urges we shall need the individualist. There are a thousand variations beyond the divination of mere science and only apparent to a kindred understanding and sympathy, like that of the artist, the musician and the true physician. We still need the individualist in medicine. This or that deal, new or old, may make his existence difficult for the time being; medicine may even be required to lapse to the period of the barber surgeon, and the returned dominance of quackery, but the individualist in medicine will return because mankind needs him.

Medicine practiced otherwise, while it may be science, cannot fulfill the entire want of humanity. The quack who may perhaps supplant the individualist for a time, if the wishes of our would-be masters prevail, may endure for a time, but the individual physician will return and there will probably be no time when the man of independence, of ability, knowledge, high training, of fine character and altruistic viewpoint will not find his services in demand.

The sick human being requires more than a mere adjustment of his primitive functions. Life consists of more than an adequate excretion of feces, of urine, carbon dioxide, and water. Food and fluids, proteins, carbohydrates, and fats do not fill entirely the needs even of the well, how very much less those of the sick. Mental pabulum, emotional stimulation are also essentials to normal balanced life. These needs are not to be measured with the gasometer, weighed with the chemical balances, nor by the scales of the up-lifter. The public still requires of its physician many qualities which are difficult of estimate, but which are nonetheless real. The flower and final purpose of our service must ever be to the sick individual and we must be like him, to know him.

Most doctors are best content and most happy when they are most busy in their chosen work. We have doubtless too much neglected our economic and social welfare. We have permitted our hospitals to be controlled by the lay board, or the hardly less terrible lady-board of man-

agers. The politician sees a great opportunity for our exploitation, and for the control of the great hold and respect which our honorable profession still has over the people. Think one moment of the possibilities political and social, to say nothing of the financial reward if the control of medicine passes over, as it threatens to do, to shrewd department store methods or to those of the beneficent banker, so beloved in the land, or to the politician whose balm is very bile itself, and whose first instinct is graft.

Unless we control ourselves, we are certain to be controlled and with such a condition of affairs, individualism, altruism, liberty of action and thought will be sacrificed to expediency, slavery, and political or social exploitation. We need a Moses, it is doubtless true, but one of our own cloth, one of our own methods of thought, interests and ambitions. Let us seek to preserve the individual in our profession by action through our own organizations and leaders.

47 WEST 9TH STREET

STERILIZATION IN ENGLAND

In view of the fact that our laws in many states follow the English law, it is interesting to read in a London letter to the *A. M. A. Journal* a legal point on sterilization presented before the Royal Society of Medicine by a lawyer Mr. Cecil Binney. Any operations performed in the interests of the patient's health or life was permissible, but apart from this sterilization might be regarded as an offense, and a person's consent was no defense against the charge of maiming. With regard to lunatics and mental defectives, the sterilization of persons who could not give consent and did not properly understand what was being proposed would be a still greater crime. Sterilization for reasons of health was always lawful; for eugenic reasons, probably unlawful; in lunatics, always unlawful unless for health reasons.

Mr. V. B. Green-Armytage demonstrated on the screen what he considered to be the best method of temporary sterilization. He mobilized the terminal inch of the Fallopian tubes and with fine catgut buried the tube in a slit in the broad ligament. The technic was simple and bloodless, but care had to be taken that the vascular supply of the end of the tube was not disturbed and that no tension existed. The advantage

of the method was that in the event of remarriage or altered conditions the buried end could be freed again. In many instances this was followed by pregnancy. For permanent sterilization he demonstrated a method that he devised many years ago, of much use to the eugenicist, as it involved only a few days in bed and no risk or pain. He opened the uterovesical pouch through the vagina, retracted the bladder and brought the uterus down. He then excised the cornual end of each tube, sewed the cut edges, and closed the vaginal incision.

Mr. Aleck Bourne brought forward a simple technic, which he had recently developed. He cauterized the uterine openings of the tubes with a diathermy electrode, which was curved so as to follow the lateral wall of the uterus. After some initial failures he could now get both tubes occluded, as shown by the use of iodized oil. The operation was quick and safe and could be done under gas in two minutes.

The Heart Committee of the New York Tuberculosis and Health Association has literature on heart disease available for free distribution among industrial nurses in the New York City area. Communicate with the committee if you can use such material.

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EDITORIALS

The Annual Meeting

All roads lead to Albany during the week of May 12, 1935. The Medical Society of the State of New York will be in annual session. Before its House of Delegates many important questions will be evaluated and determinations made. The 1st issue of this JOURNAL carried the Annual Reports of the officers and committees. The society has grown in membership and in activities. The range of topics before the delegates may be estimated when it is remembered that they range from society finances, to studies to improve the economic status of the practicing physician, that graduate education, nursing, malpractice insurance, study of pending legislation, preventive medicine, child hygiene, maternal welfare, studies to lessen the mortality of pneumonia, deafness, litigation, besides administration matters will come before the House. This is very necessary business, and the delegates and the officers entrusted with the responsibilities will carry on here as they have done in the past. Few outside intimate official circles realize the time consumed, and the sacrifices made by these faithful public medical officials without other remuneration than the pleasure derived from work for one's fellows well done.

That ours is, nevertheless, a scientific rather than a legislative gathering may be

comprehended when one reads the program for the scientific session. At both the general meeting and at the section sessions, the scientific programs for the most part presented by our own members is reinforced by a very distinguished list of clinicians and research workers from outside the State. Among these, Dr Walter L Bierring, President of the A M A, and Dr Olin West, its Secretary, will tell of the activities of that great association. Among the presentations will be a Nobel Prize winner, Dr William P Murphy. Other names whose mention calls to mind their valuable contributions to medicine are Dr Walter C Alvery and Dr Stuart W Harrington from Rochester, Minn., Dr William Allen Pusey of Chicago, Dr Alan C Woods and Dr Joseph E Moore from Baltimore, Dr Alexander Randall and Dr William D Stoud of Philadelphia, Dr Louis W Sour of Evanston, Ill., and Dr George G Smith and Dr Fred H Verhoeff of Boston.

To look through the scientific program of the sessions makes it evident that Dr William A Groat kept in mind an even balance between purely scientific and clinical medicine. The session promises to be a veritable "refresher course" in graduate medical education. The fine scientific exhibit which Dr William A

Krieger has assembled is an excellent supplement to the scientific sessions. In the technical exhibit you may be sure that "worth" and "value" has been the "watchword" in selecting the exhibits. Finally, Dr. Frederic C. Conway, the Chairman of the Committee on Arrangements, has left no stone unturned to make your stay in Albany pleasurable, and comfortable, as well as well worth the time spent in reunion with your colleagues from all parts of the State.

Contrasting Viewpoints

With interested eyes we have surveyed the communities of Europe, and we know we can never accept them fully as ideals to follow here. We know the origin of the forces that are striving to impose a pattern of medical practice upon us, and we are dissatisfied with the scheme of things as they are outlined to us. We see America as a logical and necessary leader in a reconstruction of practice so as to bring medical care where it is needed, unhindered by economic barriers.

In our columns, this issue, there appear two opposed and contrasting opinions, one stressing achievements, and the desirability of individualism in medicine by Dr. Harlow Brooks, and the other, detailing the reasons why socialization of medicine is inevitable, by Dr. Morris Rosenthal. Our readers shall be left by us to form their own opinions. Let us hope that the clarifying use of philosophic consideration may be applied to the problems these authors present.

Bourbonism and Reaction

Social Security for April, the official publication of the American Association for Social Security, Inc., seems unduly perturbed. This little paper seems to have found out that "bourbonism and reaction have ever been characterized by blind stupidity." We have been guilty of both in having published the pamphlet, "Will America Copy Germany's Mis-

takes?" We are alleged to have been used by Nazi propagandists!

The Medical Society of the State of New York expressed its disapproval of the treatment of German physicians by the Nazi régime at the 1934 session of its House of Delegates. Gustav Hartz's article had nothing to do with Nazism. Irrespective of who he was, who he represents, whether he is a Nazi or not, we believed the opinions he expressed worthy of study by American physicians. We still think so.

It is axiomatic, that when in discussion, unworthy motives are ascribed to opponents, that is evidence of being in the wrong. Let the American Association for Social Security, Inc., whose aim is "the promotion of social security and social insurance in the United States" confine itself to presenting the merits of its causes. There is no occasion to drag race prejudices, religious and foreign political hates into a discussion between us. We have enough debatable ground between us without adding factors which are not American at all.

America, we hope, will not copy Germany's mistakes either as regards Nazism or as regards the socialization of medicine.

An Important Accomplishment

The adjournment of the 1935 legislative session leaves the State started on the road to honest and efficient administration of workmen's compensation. After years of scandal and corruption, the control of medical service in industrial accidents has been transferred from the insurance companies to the profession. The permanence and success of this reform now hinge on the courage of organized medicine and the integrity and competence of participating physicians.

The procedure envisaged is simple and free from red tape. As soon as the necessary machinery has been perfected, doctors desiring to treat compensation cases will register with their County medical societies. Applications must set

forth training and experience, for the County society when endorsing a physician must specify the field in which he is qualified to practice. Evidence of additional qualifications may be submitted at any time with a view to securing wider authority.

The new law guards against the possibility, however remote, of autocratic or nepotic practices on the part of organized medicine. Any physician who is refused endorsement may appeal from the decision of his County association to the Industrial Council. While this provision allows a loop-hole for political pressure, the medical societies welcome it as removing any fear of the establishment of a spoils system within the profession.

An authorization, once granted, is valid as long as the recipient conforms to prevailing standards. It may be withdrawn only if a physician is guilty of professional misconduct or incompetence, if he exceeds the bounds set to his activities, if he fails to submit full and truthful medical reports or if he is guilty of solicitation, fee-splitting or price cutting. Although the medical societies may hear charges and make recommendations, the decision to revoke an authorization rests with the Industrial Council.

The County societies have less than two months to create the machinery for carrying out the provisions of the new law. If a society fails to act within that time, it forfeits its authority and the Industrial Commissioner may appoint a board of three physicians to make recommendations in its stead. It would be extremely regrettable if after a struggle of many years' duration organized medicine allowed the fruits of victory to slip from its hands through indifference or carelessness.

Every practitioner must co-operate to make the new law a success. The eyes of the State are upon us, and the ability, integrity, and responsibility we display in discharging the terms of this law may prove a decisive factor in the fate of other legislation affecting the future of the medical profession.

For Public Protection

The essential purpose of the Copeland Act threatens to be lost in controversy over the respective merits of the Department of Agriculture and the Federal Trade Commission as enforcement agencies. The aims of this measure are too important to be imperilled by disagreement over details. Needless to say, the manufacturers of fraudulent nostrums and dealers who thrive on exaggerated advertising are well satisfied to see dissen-sion jeopardize the prospects of the bill.

Methods of distribution have changed so radically since the enactment of the original Food and Drugs Act that drastic amendment is necessary if the purpose of this type of legislation is to be fulfilled. The tremendous cosmetic industry has grown up virtually without regulation since that time, and millions of dollars are squandered annually, in response to misleading advertising, on products that are not merely ineffective but potentially dangerous.

The Copeland Act would prevent a vast amount of unsafe self-medication. By prohibiting the advertisement, in interstate commerce, of drugs represented to have therapeutic powers in cancer, tuberculosis, venereal, cardiac and vascular diseases, it would put an end to a cause of dangerous delay in seeking authentic treatment at the hands of responsible physicians. Many lives would be saved by this provision alone.

Like every other publicity channel, radio has been widely utilized by nostrum vendors and unscrupulous cosmetic manufacturers to exploit the gullible public. Some of the smaller stations in particular, which have had hard sledding since the depression, have let down the barriers of truth and decency to an appalling degree. The Copeland Act specifically forbids the dissemination of any false advertisements of food, drugs, or cosmetics by radio broadcast, a prohibition which the medical profession has long advocated.

Of all the important measures before Congress, few are as unquestionably to

the advantage of the public as a whole as the pending amendments to the Food and Drugs Act. It would be a deplorable example of legislative maladroitness if minor differences were permitted to submerge so necessary a bill.

Hay Fever

To the victims of perennial hyperesthetic rhinitis, the coming months are not welcomed as the messengers of sunshine and ease but are dreaded as the harbingers of uncontrollable sneezing and incessant lachrymation.

It is true that a great many of these sufferers can be spared the discomforts of hay fever by allergic treatment. Nevertheless, there are some who do not respond favorably to such treatment. There is also that large group of patients who are in the throes of their first attack. Finally, there is that negligent individual who never presents himself until the opportune time for specific therapy has passed. It is to this large group of sufferers that the recent advances in therapy will bring comfort. With the revival and perfection of nasal ionization and with the recent studies of the beneficial effects of phenol applied locally to the nasal mucosa, the outlook for the otherwise unrelievable sufferer has brightened.

The reports of Warwick,¹ Tobey,² Chandler,³ Spivake⁴ and Palmer⁵ among others, bring convincing evidence that the symptoms of hay fever can, in most instances, be alleviated for the duration of the seasonal attack. For the technical de-

tails, indications and untoward results, the reader is referred to the original articles. It suffices to state here that no special training is required,—any competent physician is capable of giving his patient the full benefits of these methods.

"Alcoholic" Polyneuritis Not Due to Alcohol

While poets have been singing the praises of wine, and others more prosaically inclined have been preaching the deleterious effects of alcoholic beverages upon the human organism, medicine is continuing dispassionately to study the pharmacology of alcohol.

Of the various organic lesions attributed to the continued imbibing of spirituous liquors, "alcoholic" polyneuritis has always had its place among the most important of them until the recent studies of Shattuck,¹ Meyer,² Wechsler,³ and Minot, Strauss and Cobb.⁴ These investigators saw a close resemblance between the polyneuritis observed in excessive alcoholism and that seen in beriberi. In addition, the marked number of chronic alcoholics with polyneuritis who exhibited an associated pellagra, convinced them that "alcoholic" polyneuritis was due to a dietary deficiency.

In order to determine whether the multiple neuritis is the result of the neurotoxic action of alcohol or due to a vitamin deficiency, Strauss⁵ selected ten patients suffering from "alcoholic" polyneuritis, allowed them to continue with their usual daily intake of liquor, but kept them on a well-balanced, high vitamin diet to which yeast or its products were added. In addition, concentrated vitamin B and liver extract were injected parenterally. Not

¹ Warwick, H. L.: Treatment of Hay Fever and Its Allied Conditions, etc., *Laryngoscope* 44:173, 1934.

² Tobey, H. G.: Experiences in Ionization of the Nasal Mucous Membrane, *Ann. Otol. Rhinol. and Laryngol.* 44:94, 1935.

³ Chandler, G. F.: Hay Fever Cured By Applications of Carbolic Acid to the Nasal Mucosa, *Med. J. and Record* 136:337, 1932.

⁴ Spivake, C. A.: Vasomotor Rhinitis Treated with Pure Carbolic Acid, etc., *J. of Allergy* 4:408, 1932.

⁵ Palmer, A.: The Effect of Phenol in Hyperesthetic Rhinitis, etc., *Ann. Otol. Rhinol. and Laryngol.* 44:25, 1935.

¹ Shattuck, G. C.: *Amer. J. Trop. Med.* 8:539, 1928.

² Meyer, A.: *Schweiz. med. Wochenschr.* 62:1243, 1932.

³ Wechsler, I. S.: *Arch. Neurol. and Psychiat.* 29:813, 1933.

⁴ Minot, G. R., Strauss, M. B., and Cobb, S.: *New England J. Med.* 208:1244, 1933.

⁵ Strauss, M. B.: The Etiology of "Alcoholic" Polyneuritis, *Am. J. Med. Sci.* 189:378, 1935.

only was there no aggravation of the polyneuritis after prolonged observation under this régime, but a decided improvement occurred in each instance. He concludes from these observations that alcohol is not the primary neurotoxic factor responsible for polyneuritis but, by its disturbance of

the gastrointestinal function through prolonged or continued use, it produces a loss of appetite, poor assimilation of food and a resultant dietary deficiency. He states that "alcoholic" polyneuritis is similar to the polyneuritis of beriberi and should be treated in the same manner.

Current Comment

We have just read a little paper called "Social Security" published by the American Society for Social Security, Inc. Its aim is the promotion of social security and social insurance in the United States. It is an organ for propaganda and at present seems frankly antagonistic to the A. M. A. It enlarges upon alleged splits in the ranks of the A. M. A. It ranks the Western Hospital Association, the California State Medical Association, and the Michigan Medical Association in opposition to the A. M. A. It reports that *Oral Hygiene* discloses that four out of five dentists favor health insurance. Diagnosis has grown dramatic! Who of us falls into thinking with simplicity that progress is an orderly procession? Even were the signs correctly observed, the diagnosis still is wrong! We are so healthy a body that we remain unconscious of our legs! We are not even suspicious of the route we are traveling and hence we scarcely pause to test the signposts on the highroad of our broad avenue to service and duty. It's truly a sign of health and progress among us that differences of opinion and varying conclusions on judgments of current events can be entertained within our ordered ranks. From discussion and differences come light and progress.

"We have come to the day when control will be exercised. Police power over those who have misused their opportunities under the Workmen's Compensation Law has become a demonstrated necessity. Shall it be by layman or shall it be by physicians? We have the first try. If we succeed, it remains our task and privilege. If we fail, we deserve to surrender that power to lay authority. The new law provides opportunity. We have long said that the medical societies were the natural guardians of the medical welfare to the public. Now, we must prove that we have the capacity of self-government. Every responsible member of this organization is now under personal

and collective obligation to make the amended law function successfully."—Thus does the *Westchester Medical Bulletin* for April greet the enactment into law of the so-called "Medical Abuses Bill."

So Gustav Hartz is a Nazi propagandist! Was it not Herbert Spencer who refused to add academic title and honors after his name to permit his arguments (on origin of specie) to stand by their own weight and merit? Spencer did not want to influence judgment by the awe inspired by his high scholastic rank. In ancient times, reason and argument were stifled and obliterated by "authority," and "who spake" was more important than "what was said." For us it seems less important to know "who speaks" than to critically study "what is said." Are the arguments advanced by Hartz changed, are these less convincing by documenting his German political beliefs?

New York Medical Week, April 13, 1935, says: "Few politicians would have the temerity to suggest a revision to the abominable conditions which preceded the present Food and Drugs Act. Changed times have brought with them new evils, equally as dangerous to the public welfare, which can be curbed only by adequate legislation. Everyone who desires to see fraud eliminated from the sale of foods, drugs, and cosmetics—and this should include every physician—should wire or write his Representatives and Senators at Washington, urging speedy enactment of the Cope-land Bill."

If anyone has missed reading *Rats, Lice and History*, by Dr. Hans Zinsser, he has missed a masterpiece. Profound, it evokes admiration, and is provocative of thought. It ranges from philosophy to history, from geography to advanced science, and is full of rare, racy humor. A fine book by a fine physician.

Across the Desk

THE DOCTORS MAKE THE FRONT PAGE

From an article by Hendrik Willem Van Loon in the New York "Mirror"

The last citadel of aloofness has surrendered. It has surrendered with a bang and is merrily making common cause with its erstwhile enemies. For fully five thousand years, the medical profession had held strictly to its ancient rule of discretion. The doctor, like the priest, was to be a man set apart from the rest of the community. He followed the dictates of his conscience and of his Aesculapian oath, but was not to be besmirched by any contact with the greed of private gain.

Since modern publicity has but one purpose, to enrich the person thus publicized, the average doctor in bygone days would suffer mortal agony whenever he found his name printed black on white in one of our public news sheets. Forthwith he would write to the editor, asking that his name be eradicated from the story, for fear of becoming a Pariah among his fellow laborers in the vineyards of human misery.

And woe unto the unfortunate M.D. who printed so much as a two-lined ad., setting forth the virtues of his own cure or sanatorium! Punishment was immediate and swift. The rest of the world might go in for indiscreet ballyhoo. But the men in white would keep themselves spotless and uncontaminated.

Today pick up any paper and what do your eyes see? Twins and triplets and

appearance. People with inverted stomachs made the headlines. Babies without esophagusses (or esophagoi) were reported from all sides. Large and small and medium sized intestines became household words in connection with famous specialists changing the large ones into small ones and the medium sized ones into large ones.

Colons were reduced to semi-colons with all the privacy of flapjacks being juggled in the windows of Mr. Child's well known



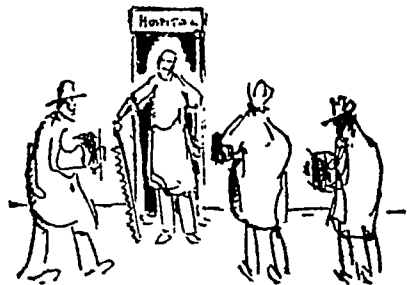
hostelries. And vascular troubles were shouted from the housetops to explain the danger that awaits us in still more years of worriful depression. Strong operations in the darkest hinterland of the peritoneum, that thus far had never strayed far away from the quiet dignity of the operating theatre, now blatantly announced themselves as being sick and tired of all this unnecessary privacy and demanded their hour in the limelight. . . .

But during the last four months the sluiceways of publicity have been opened high, wide and handsome. Today apparently the old Aesculapian oath about "modesty of private behavior" has been completely suspended, and even the dignified editors of medical journals make desperate efforts to grab a nice fat radio contract.

It is all very mysterious to the mere layman. Thus far the doctor had retained his hold upon his patients, because the average outsider was well aware of the fact that the disciples of Hippocrates and Galen were high priests of a superior craft which did not measure its success by the purely worldly standards of wealth and public recognition. . . .

quadruplets and quintuplets, with pictures of papa and mama and the officiating physician and diagrams showing the arrangement of the lying-in hospital and the nurses and the elevator-men of the hospital. But these merely served as an appetizer. The regular dinner was served immediately after and it was a full course meal.

Curious operations began to make their



I am writing this in sorrow and not in anger. These are difficult times, and even doctors must live. . . .

But I have an aesthetic objection to this flood of medical news that is now being hoisted into the general news of the day.

I like to begin the morning with a quiet glass of orange juice and a peaceful cup of coffee. And obstetrical details are not exactly conducive to a good appetite. They

are immensely important, but only to the immediate participants in these slightly intimate proceedings.

Mud is matter out of place.

I leave it to the medical journals to explain this last cryptic sentence to their subscribers.

They may copy this entire article without extra charge.—(Copyright, 1935, King Features Syndicate, Inc.)

JUST A MINUTE, MR. VAN LOON

You have the cart before the horse, but otherwise your article is O. K. Your style is packed with "pep," but unfortunately you have everything backwards. You have the doctors forcing their publicity upon the front pages of the newspapers, when you surely know that that is the one thing no doctor in the world could do if he tried a million years. And then, as if to shoot your own argument full of holes, you pick, to illustrate it, two famous cases that fail to prove your case at all.

You take the celebrated "quins" of Calender, Ontario, and Alyce Jane McHenry, of Omaha, Neb. True, they made the front pages all right, with plenty of mention of the physicians concerned, but who did it, and how was it done? In the case of the "quins" a relative phoned the local paper and asked if there was any extra charge for a birth notice of five babies. That started the fireworks. As for Dr. Dafoe, he refused even to give out bulletins till the terrific public pressure compelled it. Throughout, his behavior has been everything that is modest, high-minded and fine, and to pillory him in an article on "Doctors Make the Front Page" is neither fine or high-minded. It is "matter out of place."

The McHenry girl began to get publicity when she was on the train coming from Omaha to Fall River. Her charming ways at once made friends, the news spread rapidly, and she broke into the papers in a big way, but to blame the doctor shows a serious lack of geographical sense for the author of a famous geography, for the good surgeon was at that time something like a thousand miles away, on his way home from a cruise to the West Indies. That

makes two horses before two carts in one article, which is pretty good for one try.

But if the doctors have not forced their way into the front page, how is it that we see them all the time? Now we are coming to it, and if we only put the horse before the cart, where he belongs, we shall have the true picture. The truth is that the public are in a state of excitement over health such as the world has never seen before. Health news is now big news. Every editor, every reporter knows it. The news men invade every medical meeting of any importance, and headline choice bits from the papers and discussions in next morning's press. Unusual operations are given columns. In other words, it is the press itself that is pushing the doctor into the front page. He could never "make the front page" himself anyway, and any professional writer must know it.

Of course the medical fakirs and charlatans are trying to force their names into print all the time, and commercial mediators fill the air with claims that outdo Barnum, but they do not figure in this discussion. No other profession in the world actually disciplines its members for publicity-seeking like the medical profession. Granite-faced censors bring publicity-hunters to book, and, if they cannot clear themselves, turn them out. Even the genial and witty Mr. Van Loon should learn about this before he writes. He says "mud is matter out of place. I leave it to the medical journals to explain this last cryptic sentence to their subscribers." Well, when his matter is so entirely out of place, no further explanation seems needed.

A Correction

In the article entitled "Clinical Aspects of Forced Perivascular Drainage of the Central Nervous System," by Dr. George M. Retan, a proofreading error occurred which the editors desire to correct. On page 302 of the April 1, 1935, issue (Vol. 35, No. 7),

the fourth paragraph in the second column opens with the following sentence: "Rosenhect reported the use of forced drainage in cases of cerebrospinal and septic meningitis." Instead of "Rosenhect" this author's name should have been spelled "Rosenheck."

Society Activities

Workmen's Compensation

The amendment at first known as Bill 19 and also as the "Medical Abuses Act" signed by the Governor on March 28, 1935, is designated as Chapter 258 of the Laws of 1935. The official text follows:

LAWS OF NEW YORK.—BY AUTHORITY

CHAPTER 258

An ACT to amend the workmen's compensation law and the labor law, in relation to treatment and care of injured employees, providing for the selection by the injured employees of physicians authorized by the industrial commissioner to render medical treatment and care, empowering the industrial commissioner to establish a schedule of minimum charges and fees, enlarging the membership of the industrial council, and making an appropriation.

Became a law March 28, 1935, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. *Section thirteen* of chapter eight hundred and sixteen of the laws of nineteen hundred thirteen, entitled "An act in relation to assuring compensation for injuries or death of certain employees in the course of their employment and repealing certain sections of the labor law, and relating thereto, constituting chapter sixty-seven of the consolidated laws," as amended and re-enacted by chapter forty-one of the laws of nineteen hundred fourteen and as last amended by chapter five hundred and fifty-three of the laws of nineteen hundred twenty-seven, is hereby amended to read as follows:

§ 13. *Treatment and care of injured employees.* (a) The employer shall promptly provide for an injured employee such medical, surgical or other attendance or treatment, nurse and hospital service, medicine, crutches and apparatus for such period as the nature of the injury or the process of recovery may require. The employer shall be liable for the payment of the expenses of medical, surgical or other attendance or treatment, nurse and hospital service, medicine, crutches, and apparatus necessitated by the injury of an employee, for such period as the nature of the injury or the process of recovery may require. All fees and other charges for such treatment and services shall be limited to such charges as

prevail in the same community for similar treatment of injured persons of a like standard of living.

The commissioner shall prepare and establish a schedule for the state, or schedules limited to defined localities, of minimum charges and fees for such medical treatment and care, to be determined in accordance with and to be subject to change pursuant to rules promulgated by the commissioner. Before preparing such schedule for the state or schedules for limited localities the commissioner shall request the president of the medical society of the state of New York to submit to him a report on the amount of remuneration deemed by such society to be fair and adequate for the types of medical care to be rendered under this chapter, but consideration shall be given to the view of other interested parties. The amounts payable by the employer for such treatment and services shall in no case be less than the fees and charges established by such schedule. Nothing in this schedule, however, shall prevent voluntary payment of amounts higher than the fees and charges fixed therein, but no physician rendering medical treatment or care may receive payment in any higher amount unless such increased amount has been authorized by the employer, or by decision as provided in section thirteen-g herein.

(b) In the case of persons, injured outside of this state, but entitled to compensation or benefits under this chapter, the provisions as to selection of authorized physicians shall be inapplicable. In such cases the employer shall promptly provide all necessary medical treatment and care but if the employer fail to provide the same, after request by the injured employee such injured employee may do so at the expense of the employer. The employee shall not be entitled to recover any amount expended by him for such treatment or services unless he shall have requested the employer to furnish the same and the employer shall have refused or neglected to do so, or unless the nature of the injury required such treatment and services and the employer or his superintendent or foreman having knowledge of such injury shall have neglected to provide the same; nor shall any claim for medical or surgical treatment be valid and enforceable, as against such employer, unless within twenty days following

the first treatment, the physician giving such treatment, furnish to the employer and the industrial commissioner a report of such injury and treatment, on a form prescribed by the industrial commissioner. The board may, however, by the unanimous vote of all the qualified members, excuse the failure to give such notice within twenty days when it finds it to be in the interest of justice to do so, and may, subject to the limitations contained in section twenty-eight of this chapter, make an award for the reasonable value of such medical or surgical treatment. All fees and other charges for such treatment and services, whether furnished by the employer or otherwise, shall be subject to regulation by the board as provided in section twenty-four of this chapter, and shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living.

(c) The liability of an employer for medical treatment as herein provided shall not be affected by the fact that his employee was injured through the fault or negligence of a third party, not in the same employ, unless and until notice of election to sue or the bringing of suit against such third party. The employer shall, however, have an additional cause of action against such third party to recover any amounts paid by him for such medical treatment, in like manner as provided in section twenty-nine of this chapter.

(d) The industrial board, on its own motion, or a referee, upon the recommendation of the chief medical examiner for the workmen's compensation division, hearing a claim for compensation may require examination of any claimant by a physician especially qualified with respect to the diagnosis or treatment of the disability for which compensation is claimed; and may require a report from such physician on the diagnosis, the causal relationship between the alleged injury and subsequent disability, proper treatment, and the extent of the disability of such claimant. The physician to conduct such examination shall be designated by the commissioner from a panel of especially qualified physicians submitted to him by the medical society of the county, or any other board acting for any school of medical practice. Additional names for such panel shall be furnished by the society whenever requested by the commissioner and if such request is not complied with in thirty days the industrial commissioner may add thereto names of his own selection. The employer or his insurance carrier shall pay for such examination in an amount to be directed by the industrial commissioner.

§ 2. Such chapter is amended by inserting therein ten new sections, to be sections

thirteen-a to thirteen-j inclusive, to read, respectively, as follows:

§ 13-a. *Selection of authorized physician by employee.* (1) An injured employee may, when care is required, select to treat him any physician authorized by the commissioner to render medical care, as hereafter provided. If for any reason during the period when medical treatment and care is required, the employee wishes to transfer his treatment and care to another authorized physician, he may do so, in accordance with rules prescribed by the commissioner. In such instance the remuneration of the physician whose services are being dispensed with shall be limited to the value of treatment rendered at minimum fees as established in the schedule for his location, unless payment in higher amounts has been approved as authorized in section thirteen, paragraph a. If the employee is unable due to the nature of the injury to select such authorized physician and the emergency nature of the injury requires immediate medical treatment and care, or if he does not desire to select a physician, and in writing so advises the employer, the employer shall promptly provide him with the necessary medical care, provided however, that nothing herein contained shall operate to prevent such employee, when subsequently able to do so, from selecting for continuance of any medical treatment or care required, any physician authorized by the commissioner to render medical care as hereinafter provided.

(2) The commissioner shall prescribe the form of a notice informing employees of their privilege under this chapter, and such notice shall be posted and maintained by the employer in a conspicuous place or places in and about his place or places of business.

(3) The employer shall have the right to transfer the care of an injured employee from the attending physician, whether chosen originally by the employee or by the employer, to another authorized physician (1) if the interest of the injured employee necessitates the transfer or (2) if the physician has not been authorized to treat injured employees under this act or (3) if he has not been authorized under this act to treat the particular injury or condition as provided by section thirteen-b (2). An authorized physician from whom the case has been transferred shall have the right of appeal to an arbitration committee as provided in subdivision two of section thirteen-g and if said arbitration committee finds that the transfer was not authorized by this section, said employer shall pay to the physician a sum equal to the total fee earned by the physician to whom the care of the injured employee has been transferred, or such

proportion of said fee as the arbitration committee shall deem adequate.

(4) No claim for medical or surgical treatment shall be valid and enforceable, as against such employer, or employee, unless within forty-eight hours following the first treatment the physician giving such treatment furnish to the employer and the industrial commissioner a preliminary notice of such injury and treatment, and within twenty days thereafter a more complete report on a form prescribed by the industrial commissioner. The industrial board may excuse the failure to give such notices within the designated periods when it finds it to be in the interest of justice to do so. Upon receipt of the notice herein provided the employer shall be entitled to have the claimant examined by a qualified physician at a place reasonably convenient to the claimant and in the presence of the claimant's physician, and refusal by the claimant to submit to such examination at such time or times as may reasonably be necessary in the opinion of the industrial board, shall bar the claimant from recovering compensation for any period during which he has refused to submit to such examination.

(5) No claim for specialist consultations, surgical operations, or physiotherapeutic procedures costing more than twenty-five dollars shall be valid and enforceable, as against such employer, unless such special services shall have been authorized by the employer or by the commissioner, or unless such authorization shall have been unreasonably withheld, or unless such special services are required in an emergency. No claim for X-ray examinations or special diagnostic laboratory tests costing more than ten dollars shall be valid and enforceable, as against such employer, unless such special services shall have been authorized by the employer or by the commissioner, or unless such authorization shall have been unreasonably withheld, or unless such special services are required in an emergency.

§ 13-b. *Authorization of physicians by commissioner.* 1. The commissioner shall upon the recommendation of the medical society of each county or of a board designated by such county society, or by a board representing duly licensed physicians of any other school of medical practice, authorize physicians licensed to practice medicine in the state of New York to render medical care under this chapter. If, within sixty days after the commissioner requests such recommendations, the medical society of any county or board fails to act, or if there is no such society in a county, the commissioner shall designate a board of three

qualified physicians, who shall make the requested recommendations. No such authorization shall be made in the absence of recommendation of the appropriate society or board or of review and recommendation of the industrial council as provided in clause (g) of subdivision four of section ten-a of the labor law. No person shall render medical care under this chapter without such authorization of the commissioner, provided, that: (a) emergency (first aid) medical care may be rendered under this chapter by any physician licensed to practice medicine in the state of New York without authorization by the commissioner under this section; and

(b) a licensed physician who is a member of a constituted medical staff of any hospital may render medical care under this chapter while an injured employee remains a patient in such hospital; and

(c) under the active and personal supervision of an authorized physician medical care may be rendered by a registered nurse, physiotherapist or other person trained in laboratory or diagnostic technics within the scope of such persons' specialized training and qualifications. This supervision shall be evidenced by signed records of instructions for treatment and signed records of the patient's condition and progress. Reports of such treatment and supervision shall be made by such physician to the commissioner on such forms and at such times as the commissioner may require.

2. A physician licensed to practice medicine in the state of New York who is desirous of being authorized to render medical care under this chapter, shall file with the medical society in the county in which his office is located, or with a board designated by such society, or by a board designated by the commissioner as provided in section thirteen-b, an application for authorization under this chapter. In such application he shall state his training and qualifications and shall agree to limit his professional activities under this chapter to such medical care as his experience and training qualify him to render. He shall further agree to refrain from subsequently treating for remuneration, as a private patient, any person seeking medical treatment in connection with, or as a result of, any injury compensable under this chapter, if he has been removed from the list of physicians authorized to render medical care under this chapter, or if the person seeking such treatment has been transferred from his care in accordance with the provisions of this chapter. This agreement shall run to the benefit of the injured person so treated and shall be available to him as a

defense in any action by such physician for payment for treatment rendered by a physician after he has been removed from the list of physicians authorized to render medical care under this chapter, or after the injured person was transferred from his care in accordance with the provisions of this chapter. The medical society or a board designated by it, or by a board as otherwise provided in section thirteen-b, if it deem such licensed physician duly qualified, shall recommend to the commissioner that such physician be authorized to render medical care under this chapter, and such recommendation and authorization shall specify the character of the medical care which such physician is qualified and authorized to render under this chapter. A licensed physician may present to the medical society or board evidences of additional qualifications at any time subsequent to his original application. If the medical society or board fails to recommend to the commissioner that a physician be authorized to render medical care under this chapter, the physician may appeal to the industrial council as provided in clause (g) of subdivision four of section ten-a of the labor law.

3. Laboratories and bureaus engaged in X-ray diagnosis or treatment or in physiotherapy or other therapeutic procedures and which participate in the diagnosis or treatment of injured workmen under this chapter shall be operated or supervised by qualified physicians duly authorized under this chapter. The person in charge of diagnostic clinical laboratories duly authorized under this chapter shall possess the qualifications established by the public health council for approval by the state commissioner of health or, in the city of New York, the qualifications approved by the board of health of said city and shall maintain the standards of work required for such approval.

§ 13-c. *Licensing of compensation medical bureaus.* (1) The commissioner may, upon the recommendation of the medical society of each county or of a board designated by such county society, or of a board as provided in section thirteen-b, authorize and license compensation medical bureaus, maintained by qualified physicians wholly or principally for the diagnosis and treatment of industrial injuries or illnesses in respect of which they are authorized to render medical care under this chapter. Application for such authorization shall be made on forms to be furnished by the commissioner and shall disclose in full the nature of the personnel and equipment of such bureaus. No such authorization shall be made in the absence

of recommendation from the appropriate society or board. Each such bureau which receives such authorization shall:

(a) Make reports on its personnel and equipment in such form and at such times as may be required by the commissioner; and

(b) be subject to inspection by the commissioner or the medical society of the county in which such bureau is located; and

(c) pay to the commissioner a license fee of fifty dollars per annum for each office of such bureau.

§ 13-d. *Removal of physicians from lists of those authorized to render medical care.* 1. The medical society or board that has recommended the authorization of physicians to render medical care under this chapter shall investigate, hear and determine all charges of professional or other misconduct by any authorized physician, or by any compensation medical bureau licensed as herein provided, under rules and procedure to be prescribed by the industrial council of the department of labor and shall report evidence of such misconduct, with their determination thereon, to the commissioner. Such investigation, hearing, report and determination may be made by the board of an adjoining county upon the request of the medical society of the county in which the alleged misconduct or infraction of this chapter occurred. The industrial council of the department may review the determination of such medical society or board, and on application of the physician accused must do so, and may reopen the matter and receive further evidence. The decision and recommendation of such industrial council shall be final, binding and conclusive upon the industrial commissioner.

2. The commissioner shall remove from the list of physicians authorized to render medical care under this chapter the name of any physician who he shall find after reasonable investigation is disqualified because such physician (a) has been guilty of professional or other misconduct or incompetency in connection with medical services rendered under this chapter; or

(b) has exceeded the limits of his professional competence in rendering medical care under this chapter or has made materially false statements concerning his qualifications in his application for the recommendation of the medical society in the county in which his office is located, or of the board designated by it, or of a board as provided in section thirteen-b; or

(c) Has failed to submit full and truthful medical reports required to be made by

him to the commissioner, or the industrial board; or

(d) has rendered medical service under this chapter for a fee less than fixed by the commissioner as the minimum rate in his locality; or

(e) has participated in the division, transference, assignment, rebating, splitting or refunding of a fee for medical care under this chapter; or

(f) has solicited, or has employed another to solicit for himself or for another the professional treatment, examination or care of an injured employee in connection with any claim under this chapter.

Nothing in this section shall be construed as limiting in any respect the power or duty of the commissioner to investigate instances of misconduct, either before or after investigation by a medical society or board as herein provided, or to temporarily suspend the authorization of any physician that he may believe to be guilty of such misconduct.

§ 13-e. *Revocation of licenses to compensation medical bureaus.* The commissioner shall revoke the license of any compensation medical bureau upon a finding certified to him by the medical society, or board designed by such county medical society, or by a board as provided in section thirteen-b, that has recommended the licensing of such compensation medical bureau, or by the industrial council, that such bureau has been guilty of professional or other misconduct, or of violation of the provisions of this chapter, or that the personnel of such bureau is not properly qualified under this chapter or that the equipment of such bureau is inadequate for the proper rendering of medical care.

A medical society or board may upon direction of the commissioner or upon its own motion investigate the alleged disqualification, as defined in this section, of any physician whose authorization to render medical care under this chapter it had previously recommended, or the alleged grounds for revocation of the license of any compensation medical bureau whose licensing it had previously recommended. Such physician or bureau shall be notified of the charges against him or it and shall be given reasonable opportunity to be heard and to present evidence in his or its behalf. Upon the completion of its investigation such society or board shall communicate its findings to the commissioner and to the physician or bureau whose conduct was investigated, and shall file with the commissioner a record of the evidence upon which such findings were based.

Nothing in this section shall be construed

as limiting in any respect the power or duty of the commissioner to investigate instances of misconduct, either before or after investigation by a medical society or board as herein provided, or to temporarily suspend the license of any compensation medical bureau that he may believe to be guilty of such misconduct.

§ 13-f. *Payment of medical fees.* (1) Fees for medical services shall be payable only to a physician or other lawfully qualified person permitted by section thirteen-b of this chapter to render medical care under this chapter, or to the agent or to the executor or administrator of the estate of such physician. No physician rendering treatment to a compensation claimant, shall collect or receive a fee from such claimant within this state, but shall have recourse for payment of services rendered only to the employer under the provisions of this chapter. Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services.

(2) Whenever his attendance at a hearing is required, the physician of the injured employee shall be entitled to receive a fee from the employer, or carrier, in an amount to be fixed by the commissioner in addition to any fee payable under section one hundred twenty.

§ 13-g. *Payment of bills for medical care.*

(1) Unless within thirty days after a bill has been rendered to the employer by the physician or hospital which has treated an injured employee, such employer shall have notified the commissioner and such physician or hospital in writing that such employer demands an impartial examination of the fairness of the amount claimed by such physician or hospital for his or its services, the right to such an impartial examination shall be deemed to be waived and the amount claimed by such physician or hospital shall be deemed to be the fair value of the services rendered by him or it.

(2) If the parties fail to agree as to the value of medical aid rendered under this chapter such value shall be decided by an arbitration committee consisting of two physicians designated by the president of the medical society of the county in which the claimant resides, and two physicians, also members of the medical society of the state of New York, appointed by the employer or carrier. The majority decision of the arbitration committee shall be conclusive upon the parties as to the value of the services rendered. In the event of equal division, the committee shall select a fifth physician, also a member of the medical society of the state of New York, whose

decision shall be conclusive. If the physician whose charges are being arbitrated is a member in good standing of the New York Osteopathic Society or the New York Homeopathic Society, the members of such arbitration committee to be appointed, similarly, shall be physicians of such organization and the president of such organization shall make the designation provided herein.

(3) The parties to arbitration proceedings under this section shall each pay to the industrial commissioner a sum equal to five per centum of the amount payable under such decision, or a minimum of two dollars, whichever is greater. From sums so collected the commissioner shall pay to each member of the arbitration committee, a per diem fee of ten dollars for each arbitration session attended.

§ 13-h. *Medical treatment by public hospitals.* Hospitals maintained wholly by public taxation may treat only emergency cases under this chapter, and may treat such emergency cases only so long as the emergency exists. This section shall not be applicable, where there is not available a hospital other than a hospital maintained by taxation, nor shall it prevent any municipal, county or state hospital from rendering medical services to employees of such hospital or such political subdivision.

§ 13-i. *Solicitation prohibited.* Any person who shall make it a business to solicit employment for any person authorized by this chapter to render medical care to an injured employee in connection with any claim under this chapter, shall be guilty of a misdemeanor, except that the employer shall have the right subject to regulations prescribed by the commission, to recommend to the injured employee the names of enrolled physicians who he believes to be competent to treat him.

§ 13-j. *Medical or surgical treatment by insurance carriers and employers.* (1) An insurance carrier shall not participate in the treatment of injured workmen, except, that it may employ medical inspectors to examine compensation cases periodically, while under treatment, and report upon the adequacy of medical care, and other matters relative to the medical conduct of the case. (2) An employer may maintain a compensation medical bureau at the place or places of employment, if such bureau is required because of the nature of the industrial hazards, or the frequency of injuries to employees arising out of industry. Such bureau or bureaus shall be authorized and licensed pursuant to section thirteen-c, and their use by an injured employee shall be optional in accordance with the provisions of section thirteen-a.

§ 3. Section twenty-four of such chapter, as last amended by chapter six hundred fifteen of the laws of nineteen hundred twenty-two, is hereby amended to read as follows:

§ 24. *Costs and fees.* If the court before which any proceedings for compensation or concerning an award of compensation have been brought, under this chapter, determine that such proceedings have not been so brought upon reasonable ground, it shall assess the cost of the proceedings upon the party who has so brought them. Claims of attorneys and counselors-at-law for legal services in connection with any claim arising under this chapter, and claims for services or treatment rendered or supplies furnished pursuant to subdivision (b) of section thirteen of this chapter, shall not be enforceable unless approved by the board. If so approved, such claim or claims shall become a lien upon the compensation awarded, but shall be paid therefrom only in the manner fixed by the board. Any other person, firm or corporation who shall exact or receive fee or gratuity for any services rendered on behalf of a claimant except in an amount determined by the board, shall be guilty of a misdemeanor. Any person, firm or corporation who shall solicit the business of appearing before the board on behalf of a claimant, or who shall make it a business to solicit employment for a lawyer in connection with any claim for compensation under this chapter shall be guilty of a misdemeanor. In case an award is affirmed upon an appeal to the appellate division, the same shall be payable with interest thereon from the date when said award was made by the board.

§ 4. Section ten-a of chapter fifty of the laws of nineteen hundred twenty-one, entitled "An act in relation to labor, constituting chapter thirty-one of the consolidated laws," as added by chapter four hundred sixty-four of the laws of nineteen hundred twenty-four and last amended by chapter one hundred sixty-six of the laws of nineteen hundred twenty-seven, is hereby amended to read as follows:

§ 10-a. *Industrial council.* 1. To advise the commissioner, there shall continue to be in the department an industrial council composed of fifteen members appointed by the governor. Five members of the council shall be persons known to represent the interests of employees, five shall be persons known to represent the interests of employers, and five shall be physicians licensed to practice in this state and known to represent the schools of medical practice eligible to practice under the workmen's compensation law. The governor may

remove any member of the council when such member ceases to represent the interests in whose behalf he was appointed, or, in the case of the members who are physicians, ceases to be licensed to practice.

2. The commissioner shall be an additional member of such council and act as chairman thereof. The chairman of the industrial board shall also be an additional member of such council and shall be vice-chairman thereof, to act in the absence of the commissioner. The commissioner shall designate an employee of the department to act as secretary to the council and shall detail from time to time to the assistance of the council such employees as may be necessary.

3. The members of the council shall be entitled to compensation at the rate of not exceeding ten dollars per day for each meeting attended by them, or each day actually spent in the work of the council. They shall also be paid their reasonable and necessary traveling and other expenses while engaged in the performance of their duties.

4. The council shall (a) consider all matters submitted to it by the industrial commissioner and advise him with respect thereto; (b) on its own initiative recommend to the commissioner such changes of administration as, after consideration, may be deemed important and necessary; (c) cooperate with the civil service commission in conducting examinations and in preparing lists of eligibles for positions, the duties of which require special knowledge or training, and advise the commissioner in the selection and appointment of employees to such positions; (d) consider all matters connected with the practice of medicine submitted to it by the commissioner or the industrial board; (e) consider the qualifications for, or persons being considered for appointment by the commissioner to positions directly involving the practice of medicine, and advise the commissioner regarding the fitness of such persons for appointment; (f) prescribe rules and regulations to govern the procedure of investigations and hearings by medical societies or boards of charges against authorized physicians and licensed compensation medical bureaus as provided in section thirteen-d of the workmen's compensation law; (g) investigate on its own initiative charges made by a physician that he has been improperly refused authorization to do compensation work by a medical society or board, or by the commissioner and, if it sustain the charges, recommend such authorization to the commissioner; (h) on

its own initiative investigate and pass on charges of misconduct by either a physician or a compensation bureau authorized to treat injured workmen under this chapter; (i) review the determination of charges of misconduct where the physician accused appeals from the decision of the medical society or board which took jurisdiction in the first instance. In such cases the council may reopen the matter and receive further evidence. And the decision and recommendation of the council shall be final, binding and conclusive upon the industrial commissioner.

5. The council shall adopt rules and regulations to govern its own proceedings. The secretary shall keep a complete record of all its proceedings which shall show the names of the members present at each meeting and every matter submitted to the council by the commissioner and the action of the council hereon. The record shall be filed in the office of the department. All records and other documents of the department shall be subject to inspection by the members of the council.

6. The duties and powers of the council shall not extend to any matters affecting the administration of the state insurance fund.

The provisions of sections nineteen-a and nineteen-b of the workmen's compensation law limiting and restricting professional activities of physicians or surgeons in the employ of the department, shall also be applicable to and binding upon members of the council.

§ 5. The sum of twenty-five thousand dollars (\$25,000), or so much thereof as may be necessary, is hereby appropriated to the department of labor from any moneys in the state treasury not otherwise appropriated to pay the expenses of the department, including personal service and maintenance, in carrying out the provisions of the workmen's compensation law and the labor law, as amended by this act, payable from the state treasury on the audit and warrant of the comptroller on certification as provided for in section twelve-a of the state finance law.

§ 6. This act shall take effect July first, nineteen hundred thirty-five.

STATE OF NEW YORK, }
Department of State. } ss.:

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

EDWARD J. FLYNN, *Secretary of State*

PRESIDENT'S ADDRESS.**129TH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE
STATE OF NEW YORK AT ALBANY**

ARTHUR J. BIDILL, M.D.

ALBANY

The condition in which medicine finds itself today is not the result of poor service, unequal distribution of physicians nor excessive fees. Increased cost of sickness is the direct consequence of outside parasitic growths, extravagant, lavish hospitals, unnecessary clinical laboratory tests and nation-wide economic disturbance.

Physicians have not only allowed themselves to be exploited by huge lay corporations, which advertise special methods of diagnosis, but have also permitted thousands of outsiders with no medical knowledge to force themselves upon patients, while at the same time all of their mental and physical energy has been used to reduce the causes for which their services are required.

The harassed, underpaid, unoccupied, dissatisfied men of medicine no longer listen to reason, but turn their attention to rough, class exciting piffle, which comes from those who cannot see the end of the road, yet entice the misguided to follow them to complete annihilation. In their midst, thought has succumbed to mob frenzy, and they cannot hear the truth when deafened by the yelpings of the destroying hounds.

Out of a welter of words from pseudo-economists, it may be possible for an extreme optimist to recognize a faint gleam of a new system of medicine, but when we see them fail to solve their own particular problems, we are neither informed nor impressed by their theories.

Often men gather to discuss for the medical profession important contacts

with laymen, and their recommendations prove that the proposed schemes cannot be separated from that system of life which all Americans abhor, state control. The suggestions are too uncertain to be called plans and too hastily conceived to become methods for they are socialistic, and, as Ovid says, they have "not altogether the same features nor yet different but such as would be natural in sisters." Compulsory health insurances are only political plums to be distilled into more of the brandy of indolent ease for those already intoxicated with power.

The proponents of these obnoxious measures consider the time propitious. Many hearts are filled with impatience and everywhere the search is for a plan to liberate the world. A scheme no matter how old, how unsuccessful in the past, how futile, how ill conceived, or how uncertain its end must be advanced. The failures of one generation are forgotten by the next who are ready to repeat those of their forefathers.

Medical men have been trained in observation and the application of remedial measures, and although some treat symptoms, they all try to remove the cause. To attempt to relieve the cancer of economic disaster by the adoption of a few rules for the amelioration of a symptom is unworthy of the conscientious physician, who must seek the hidden sources of disease.

The individuals who attempt to discredit organized medicine by saying that the leaders suggest no plan are belittling your intelligence. You know that the

advocates of state medicine propose, just for the sake of talking, childish temporizing hypotheses.

Listen to their reveries, the wordy outpourings and dribble that drools from the lips of those who say organized medicine has failed. Let them try to explain their expedients, and you will hear even more absurdities than those which came from the recent triumvirate of vituperation. The inherent fallacies in their proposals, the economic monstrosities presented, and above all, the unformed, incomplete, totally inadequate suggestions display their lack of knowledge. They, like other Hertzian wave agitators, jangle our nerves, fail to convince by sincerity or wisdom, and finally fade in a static murmur of unnamed, immature thought infants whose paternity is not in question, for they present the stigmata of inherited taints linking them to the despots of old.

They promise that every doctor will be absorbed by the state, and on the other hand they say that there are already too many physicians. Can both of these statements be true? This is merely a sample of the specious reasoning by which they hope to convince the credulous physician that the adoption of their scheme will provide for him a Utopia or an Eden.

It is questionable, if under present conditions, there are not more physicians than can be supported, more are graduating, the market is surfeited but we cannot, figuratively speaking, either plough the new ones under or Townsendize the older, for if a physician remains active and alert with increasing years he becomes an asset of ever increasing value.

There is no justification for the state health officials attempting to change our system of practice. From the rise and fall of nations we may draw valuable lessons, for some in positions of authority today have not risen by ability, but have been thrust up by favor. The intrinsic perils in politically controlled groups are enough to cause even the reckless to pause, the danger signs of trouble are flashing, the policeman of conscience holds his hand at stop, and who but the mad would proceed against such warnings; some urging caution and all suggesting misfortune if disregarded.

When those whom we pay to do certain specific acts assume powers never

originally intended for them, and when these same servants of the state make rulings so arbitrary and so unwise that it is practically impossible for a conscientious physician to abide by them, it is time to register the protest of the majority to drown the chatter of the vociferous few who attempt to dominate.

When over the protest of the physicians of a community the state or any organized class can insinuate itself into the home life we are approaching the end of the real American tradition. The profession must ferret out and remove from any semblance of authority those who wish to reduce the people of this country to the misery and degradation of some other nations. More than the method of medical practice is involved. We are on the threshold of a new era which seems to take upon itself the form of a chaotic descent to the Stygian depths of a new Hades. Would that I could arouse every one of you from the hypnotic slumber which has come upon you from the nauseating alphabetical gas compounds of a new deal. I do not speak from the viewpoint of a party, but from the pulpit of universal good I denounce those who would place us in bondage as physicians and destroy us as a people.

A few decades ago this nation had to endure a terrible ordeal when brother was against brother, and the very foundations of liberty were shaken by the extent and severity of the struggle to maintain the union. Those days, sad and most awful as they were, will be as nothing compared to the future if the scatterbrains who fail to recall the lessons of history force our people to become the white slaves of a socialistic, communistic, or Fascistic government. As a most liberal profession we know the fate of those who would betray us and we most certainly trust that those in our ranks who wish to advance their own lot at the expense of the profession at large may meet a deserved, and immediate removal from the sight of honorable men.

The Greek gift-bearer is still active, a job here, an appointment there, a preferential rate, a hospital position, a commercial contact are some of the forms to which the ancient has descended. Happy is he whom the dangers of others makes cautious.

It has recently been said that within the next twenty to fifty years 85 per cent of all medical treatment in the United States will be rendered by government-paid physicians, and also that hospitals will dominate medicine. These are both dreams, expressed wish fulfillments; the latter is outrageous in principle for it proposes one of the most destructive of all influences, an intermediary lay agent working for the benefit of an institution. This must never be accepted for the very marrow of life giving rejuvenation of medical service would be destroyed, and weak, fawning puppets without initiative or desire would induce a pernicious anemia of the mind and body. To allow hospitals to control medical men would be a reversion to olden times when there was taxation without representation, a regression to medievalism. The patient and the physician would deplore the domination of any class that wished to break down a system which has made American medicine the best, the most advanced, and the safest in the world.

To attempt to socialize medical service is to tamper with the very source of our spiritual and material welfare by destroying individual responsibility for a false sense of security. No greater tragedy can transpire in a nation than the displacement of the sturdy, freedom loving, independent individual by a servile class. I am not unmindful of the psychology of those who wish to sacrifice freedom by the insensate idolatry of ideas or of persons by misguiding the youth of a country to enter into an order predestined to failure. The spectre of universal relief stalks the land, paralyzing the individual with fear and only exhilarating those who expect to gain by the general calamity. The lethargy of despair has become the instrument of further destruction. Might does not make right nor is mass action a proof of wisdom, for too often it is only political expediency and not justice which motivates it.

When we think of the individual we must consider the profit motive which is, and always will be, the most urgent and most compelling of human instincts. The desire for health is only second to that of security, and if we remove the stimulus to save, we destroy the work incentive without which there is no lasting, endur-

ing spiritual or mental advance. There are only two economic systems—individualism and collectivism. The former has always dominated in America. We must resist any and all attempts to traduce it.

Some physicians say that they are neutral, that they will not work for the old order or oppose the new, and yet without their becoming conscious of the fact they will be brought into the argument, weakened in mind by their wasteful mental habit of middle-of-the-road policy. They are too proud to fight but not too weak to die.

A campaign of territorial invasion has often been engineered through the channel of a provoked "incident" so the advocates of health insurance, through various paid agencies, are attempting to make a medical "incident" develop out of these times of economic uncertainty. There are too many medical statesmen who can see through this imitative diplomatic aggression to allow physicians of this country to become the servants of an unknown, undefined, Marxian state. Although medicine is attacked from many angles the onslaught is not of the masses, and, therefore, the people and the profession can be saved from the attempted overthrow. The advancing army of devastation can be repulsed and disbanded. I see through a nebulous cloud our enemies and our exploiters working to get local, state, and national jobs in return for their betrayal. Unless you have been interested in the ramifications of political patronage you have no conception of the concentration of power which is possible in these acts, and which their promoters foresee. Look about you. See why some are so active for state medicine. Do not rest content with a superficial hurried word of mouth report; get beneath the surface for it is there that you will find the focus from which the ankylosing arthritis of political favoritism is disseminated.

One purpose of organized medicine is to expose impractical plans recommended by those inside and outside the ranks. Many suggestions have been made; organized medicine has analyzed all of them. It has observed the patients upon whom the experiments have been tried and has seen the fearful evils of the Ger-

man and Austrian methods, the dissatisfaction attending the French scheme, and it has watched the agony of suffering Britains. All experience has proven that a universal compulsory plan is extravagantly wasteful and that medical service is not delivered at a decreased cost, but that, on the contrary, it takes more money and affords less genuine relief.

It is truly lamentable that those who champion these plans fail to recognize that our peoples are freer in mind and in body than those upon whom these schemes have been forced. Foreign plans are like modernistic paintings in that the effect only at a distance is good.

Physicians have attempted to show the folly of unwise state hospital expansion and suggested caution and investigation before further intrusion into the field of private practice with the result that they have been considered obstructionists, but when the ship of state munificence nears the rocks of extravagance, then the pilots, to save their faces, start rumors that the physicians are incompetent and do not understand their work, and this applies to graduates of reputable medical schools duly licensed by the authorized State Board of Regents. The inconsistency, and in fact the untruthfulness of such assertions, are enough to discredit the entire state board of health program.

The prohibition fiasco proved costly and had to be stopped, for in its train of compulsion there was a frightful loss of moral values.

Compulsory insurance is comparable; it must be prevented, for once it is established it will be impossible to abolish.

The cry of the world is for help to overcome the stagnation of the day. Medical men know that for centuries gold has been administered for chronic, incurable diseases, the wise ones also appreciate that as a curative agent it ranks low in the scale. Therefore, none of us can see how the artificial gold of the dictator alchemist can cure the most oppressive of all diseases, discouragement, nor can we, by the same token, see how wholesale methods of so-called health insurance can assist in economic recovery or health preservation.

Life is a constant struggle. No man-made set of rules will long prevail against

nature. With endless examples of her beneficence, why do we now desert her, and feel compelled to wage war against her immutable laws? Not because of fear, not because of indifference, lack of sympathy nor understanding do those whom you elected urge you to hold to the good of the old, but because of their abounding faith in nature to re-establish her essential kingdom when the units of service will again be coalesced into a functioning whole. Appendicitis has been known for years, thousands and thousands of lives have been saved by the application of the correct operative and medical measures. Time plays a leading role in the outcome. Gentlemen, time is the element in our present state of unrest. America is called the melting pot of the world, but foreign schemes for the political domination of medical service must never be permitted to gain a foothold in the land of the free.

The day of totalitarianism has not arrived. The individual when sick is still an individual and as such deserves the particular care necessary to cure, if possible, at least to alleviate his suffering. Neither mass production nor standardization are applicable to medical practice, for our patients may be similar but they are not identical and never will be automatons molded in the same form of body or of mind. Wherever numbers become the goal, service deteriorates bringing in its wake the inevitable cupidity of some who wish to profit at the expense of others.

What is the remedy? The indications point to radical operations upon the fungus growth of centralized government, medicinal rehabilitation, and economic convalescence.

There can be no doubt but that the number of medical students must be limited and that the pseudo-physicians, health nurses, must be restricted in numbers and in their activities. How this is to be done is causing educators considerable mental anxiety. The task is ours.

The re-establishment of the practice of medicine to its former healthy condition is predicated on the surgical dissection and eradication of the tumors of state department extension and federal government expansion.

The practitioners of medicine appreciate the difficulties which surround the

diagnosis of some serious cardiac diseases, and it is a known fact that many patients boast of their excellent health shortly before sudden death. To the observant, state extension is likened to the euphoria of the patient suffering from a circulatory disease. The danger to community life from governmental usurpation of practice is far greater than even a temporary statistical improvement produced by juggling figures and drawing unwarranted conclusions.

Fortunately, the human body contains elements for its growth and the continuance of life so that if physical surroundings, mental depressions, and fears are satisfactorily adjusted, health and productive power will be restored. Revive the prosperity of this country and the ruddy cheeks, resilient steps, and the animated cheerfulness of hope will once more be present throughout the land, and the destroying Mephistopheles of state control will not parade about as the conquering Nero.

Our salvation is devotion to duty, the constant and continuous study to perfect ourselves in our most honorable profession by taking advantage of the established methods of postgraduate work. The County Society is the place where all reputable, ethical, licensed physicians can most readily absorb current medical thought.

We wish our results measured by

standards established by custom, not by methods to subvert and nullify reasonable deductions. No one has a moral right to decide as a matter of opinion that which can be determined as a matter of fact. How truly it can be said today as of old, "Tyranny over thought amounts to a declaration of war against the mental freedom of mankind."

When new economic states are instituted the burden of failure falls upon the masses who gain nothing either by defeat or by victory.

These are times when we recognize the importance of fairmindedness, the faculty to think a problem through, and the will to fight against ignorance, folly, and the presumptions of the few to a profound knowledge of human nature and their talent to direct our lives. We need builders, not wreckers, individuals to direct, not commissions to order.

It is so easy to govern the good that we may anticipate an early, rosy-fingered dawn of new hope and new responsibilities as soon as we pass the critical stage of the present insane desire for dictation.

May you leave this hall tonight with a firm resolve to be a better physician, a better citizen, and a better helper in the struggle of man to recover his faith in this the greatest country on the globe. We need a service of deeds not words, a devotion of the spirit, an uplift of the soul.

344 STATE STREET

COLD STORAGE BLOOD FOR TRANSFUSION

Cold storage products of all sorts are getting to be so common that it is hardly a surprise to learn that in France they now keep supplies of blood in the refrigerator, to have them handy for transfusion. A Paris letter to the *A M A Journal* says that in the French capital one of the many large public hospitals serves as a center, from which grouped and adequately tested donors are available at all times but in smaller cities such as Bordeaux in the south of France an effort has been made to utilize the blood of donors (universal group), which has been collected in flasks and kept liquid with the aid of a 10 per cent sodium citrate solution.

Jenneny and Viero, at the December 5, 1934, meeting of the National Surgical Society, reported the details of how such blood is kept in a refrigerator at 2°C

(35.6° F). The blood can be utilized only during a period of twenty days after being placed in the refrigerator.

In only six of seventy cases were any reactions observed, in the form of a severe chill with slight fever (one case), slight chills without fever (four cases) and a feeling of paresthesia (one case). The simplicity of the technic of collecting the blood and its administration renders it available for city hospitals where much time may be lost in making the various tests, especially those for syphilis.

Examination of the refrigerated blood reveals no changes in its components.

There have been three strikes by medical men in France in protest against the so-called medical system there, said Dr. Morris Fishbein in a recent address.

GENERAL ANESTHESIA IN ALLERGIC PATIENTS

A Review of 204 Cases of Tonsillectomy and Radical Antrum Operations

ROSE H. ANDRÉ, M.D., AND R. CLARK GROVE, M.D.

From the Medical and Otolaryngological Divisions of the Department of Allergy, Roosevelt Hospital, and the Surgical Division of the New York Hospital and Cornell Medical School Association

NEW YORK CITY

The question as to whether general inhalation anesthesia is contra-indicated in patients complicated by allergic conditions, especially those involving the respiratory passages, prompted this report of our experience. It is presented primarily for the benefit of the physician, since he is the one who decides upon the necessity of surgical procedures and must assume responsibility for the surgical and anesthetic risks. Its intent is also to show a method which embodies safety to the patient, simplicity in technic of administration and freedom from complications; and to compare the results with this method as used in the allergic group with those in nonallergic surgical cases.

A review of the literature reveals that many studies have been made in reference to the pulmonary complications following routine nose and throat operations where inhalation anesthesia was employed. However, none of these investigations dealt exclusively with the special group of allergic cases. Some of these statistics, including those of pulmonary and other complications, are reported.

Method and Technic

In describing the method and technic employed in our series of cases, we consider the selection of the cases for surgery, together with the careful preoperative preparation of the patients, to be most important. In this respect, we have found it extremely valuable to have the co-operation and assistance of a trained allergist-physician. The allergic condition of all patients was first ascertained before surgical procedures were undertaken. After careful medical treatment of the allergy such surgical procedures as submucous resection, turbinectomy, removal of polyps, antrum irrigations, and the like were performed

under local anesthesia, preparatory to more radical operations. An effort was always made to determine how much improvement could be obtained by preoperative allergic treatment. In general, the following preparatory measures were instituted:

(1) A thorough general physical examination, giving special attention to mouth hygiene, urine, and blood pressure, was made in all cases from one to several days before operation. This examination included chest x-rays and basal metabolism if such were indicated. (2) On the day of operation, the chest was again examined carefully. (3) Patients with elevated temperature or signs of acute upper respiratory infection were always excluded. (4) In the use of premedications, drug sensitivity was ruled out as much as possible and wherever known, that drug omitted. The usual preoperative medications used were as follows: Morphine sulphate (8.1-16.2 mgm.), Pantopon (20 mgm.) or codeine sulphate in children (8.1 mgm.), given by hypodermic 30-45 minutes before operation. Occasionally atropine sulphate (0.03-0.04 mgm.) was added. A few cases were given sodium amytal (0.2 gm. by mouth) at bedtime the night before, and the dose repeated two hours before operation. Five of the cases in this series received avertin preoperatively, the doses employed being 60-90 mgm. per kilogram of body-weight. A few cases received no preliminary medication at all.

Figures 1, 2, and 3 illustrate the method and technic used. After properly inducing the patient with nitrous oxide and oxygen or ethyl chloride, open ether vapor was used, and carried to the point of just sufficient depth to relax the jaw properly for insertion of the mouth-gag. The open method of anesthesia was then continued

Read before the Society for the Study of Asthma and Allied Conditions, Atlantic City, April 28, 1934

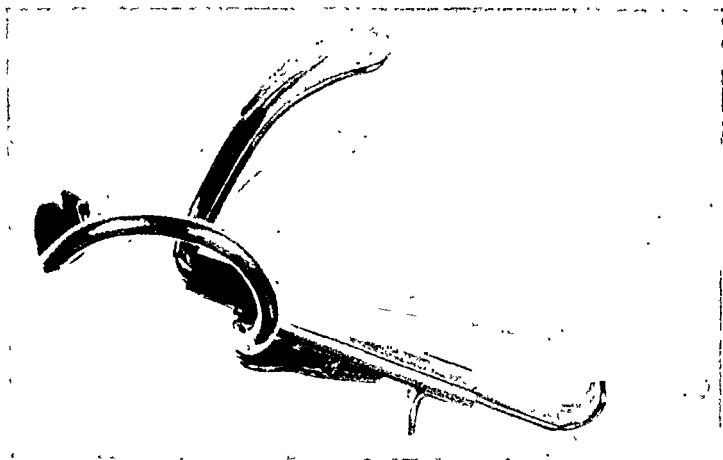


Fig. 1. The Davis-Crowe mouth-gag showing anesthesia tube.

through the Gwathmey gas-ether apparatus, using mainly nitrous oxide and oxygen, small amounts of ether vapor being added only when absolutely necessary to keep the patient quiet. At the close of anesthesia, hyperventilation (Henderson) was used, 5 per cent carbon dioxide and oxygen being employed in rebreathing the patient for from 1 to 3 minutes, in a further effort to avoid pulmonary complications.

The Davis-Crowe* mouth-gag¹ is the instrument employed to obtain the proper exposure and through it, anesthesia is maintained. This instrument was designed for neurologic and nose and throat surgery and is used exclusively in the Johns Hopkins Hospital. It was introduced to the staff of the Henry Ford Hospital about 18 years ago by R. D. McClure.

After the patient has been carefully draped and placed in the modified Rose position and the mouth gag put in place, the nasopharynx is packed off with a lubricated nasopharyngeal gauze pack. Thus the operator has complete control of

the patient's throat at all times. An adequate suction apparatus must be a part of the ensemble. The importance of such an excellent exposure with the glottis in full view, the tonsils well-defined and the tongue automatically out of the way, cannot be overestimated by the careful surgeon. An assistant is not necessary with this method, unless one is desired to handle the suction tube. Aspiration is avoided. On removing the nasopharyngeal pack at any time during the operation, the throat is found to be clear and dry.

The authors are quite aware that it is the consensus of opinion in operations upon the nose, mouth, and throat, that general anesthesia may be dangerous, because of the blood and debris which are forced into the trachea. However, with the method described above, this has not been our experience with these allergic patients, many of whom had chronic bronchitis, some of whom were actively asthmatic.

CASE STUDIES

(August 1930 to March 1934)

Cases reviewed	204
Tonsillectomies	141
Radical antrums (Caldwell-Luc) single	41
Radical antrums (Caldwell-Luc) bilateral	22

*Crowe, S. J., of Johns Hopkins Hospital describes Dr. E. C. Sewall of San Francisco as the originator of this mouth-gag, with modifications by Dr. Griffith Davis.

Ages. The method described was used on patients of all ages. The adults were divided into the following groups:

Young adults (18-30).....	38
Middle age (31-60).....	95
Old age (60 or over).....	8

Total 141

The children were grouped as follows:

Infants and runabouts (under 5 years)	11
Older children (5 to 18).....	52

Total 63

Sex. The sexes were almost equally

divided in this series, there being 104 males and 100 females operated upon by this method.

Nationality and Race. All nationalities were included: Colored (1), U. S., 125; Heb., 42; Ital., 17; Russian, 5; Scandinavian, 2; English, 2; Austrian, 2; German, 1; Belgian, 1; Polish, 2; French, 1; Bulgarian, 1; Hungarian, 1; Roumanian, 1; Greek, 1.

Preoperative Diagnoses. These 204 cases may be divided into: (a) definitely allergic 164; (b) nonallergic 40, used as a basis of comparison. Of the definitely allergic patients in this series 155



Fig. 2. The mouth-gag in place.



Fig. 3. The patient in the modified Rose position and the administration of the nitrous oxide-oxygen-ether anesthesia.

had either hayfever or asthma or both; 19 had vasomotor rhinitis; 12 were diagnosed as eczema; 8 had urticaria and 4 cases were angioneurotic edema. Ninety-four of these were complicated by chronic sinusitis.

In the nonallergic group, the following conditions were diagnosed:

Chronic tonsillitis and adenoids	26
Chronic sinusitis	13
Frequent colds	10
Chronic arthritis	3
Chronic skin conditions (acne and dermatitis)	5
Epilepsy and chorea.....	3

Preoperative Condition of Patients.

The cases in this series were grouped as I, II, and III, according to the type of risk for operative procedure and anesthetics.

Group I included only *good* risks, those cases uncomplicated by other conditions, except allergy. Of this group there were 165 cases. Group II, consisting of fair risks, included 32 cases, whereas Group III or the poor risk individuals totalled 7 cases. The poor risk factors of this last group were due to cardiorenal pathology with or without hypertension,

severe asthma with marked chronic bronchitis, fibroid tuberculosis, and bronchiectasis.

Anesthetic Agents. The anesthetic agents employed in this series of cases were as follows: Nitrous oxide, oxygen, and ether vapor in 106 patients; ethyl chloride, nitrous oxide, and ether vapor in 93 patients; avertin in 5 cases (60 mgm. per kilo in 4 patients; 90 mgm. per kilo in 1 case) supplemented with nitrous oxide and oxygen alone or ether vapor. When ether vapor was added to the mixture of nitrous oxide and oxygen, for maintenance anesthesia, the amounts varied from a few whiffs to one and one-half ounces. Many cases required no ether for maintenance. Four of the avertin cases required only nitrous oxide and oxygen as supplementary anesthesia.

Duration of Anesthesia. This varied considerably according to the type and extent of operation. Also many cases were secondary operations on incompletely removed tonsils and antra with previous window resections. A number of cases had extra procedures superimposed such as antrum irrigations. The shortest case was 10 minutes (adenoid-

ectomy only); the longest was 2 hours and 20 minutes for a bilateral radical antrum operation. The average time of anesthesia in all cases was about 60 minutes.

Reaction to Anesthesia. In general, the patients in this series reacted very well to the anesthesia, there being no marked changes in pulse, respirations, or blood pressure. All cases in the group received nitrous oxide gas and oxygen for maintenance anesthesia. There appeared to be no unusual effects due to the latter. The number of patients showing a tendency to develop mucus, which was more than the average was 23; the cough reflex was troublesome in 10 cases, hic-cough in two and vomiting in three. One patient, a child of three and a half years, likewise took the anesthetic very poorly. This patient was operated upon on a hot summer's day. Respirations stopped suddenly, but were promptly restored with carbon dioxide and oxygen and dilatation of rectal sphincter.

Postoperative Condition. The post-operative course in these patients was unusually smooth and uneventful in the great majority. Patients were turned on their side as soon as operation was finished and kept in this position until conscious. If there was much loss of blood or shock they were given per rectum 300 c.c. of 5 per cent glucose in 1 per cent soda bicarbonate solution of normal saline while still unconscious and this dosage was repeated every three to four hours until the condition was satisfactory. No transfusions were necessary in the group. In only one case was any cardiovascular stimulant used, this being in a patient with chronic myocarditis who suddenly developed an auricular fibrillation on the third postoperative day. Strophanthin intravenously quickly relieved him. Of the total of 204 cases operated upon, the following abnormal variations occurred and all in the allergic group:

- | | |
|--|---|
| (a) Exacerbation of asthma..... | 3 |
| (requiring adrenalin postopera-tively) | |
| (b) Unusual temperature reaction..... | 1 |
| (with negative chest findings and relieved with S. S. Enema) | |
| (c) Cardiac fibrillation | 1 |
| (following radical antrum) | |
| (d) Drug reactions | |
| (1) Postoperative (18 hours), codeine, with severe giant | |

- | | |
|---|---|
| urticaria | 1 |
| (2) Postoperative (24 hours), aspirin, with urticaria..... | 1 |
| (e) Primary hemorrhage | 2 |
| (within 1 to 4 hours, both cases requiring operation for ligation under anesthesia) | |
| (f) Shock, ending in death..... | 1 |

The patient dying in shock was one of our earliest cases, admittedly a poor risk, with chronic fibroid tuberculosis and severe asthma. His condition became grave immediately after a bilateral radical antrum operation in which there was considerable bleeding. He never rallied and died on the evening of the operative day despite shock treatment.

Postoperative Complications. All cases were followed closely for complications for at least one month. Thereafter we employed a follow-up system at regular intervals. All records were carefully checked and notes made by the surgeon and allergist physician regarding each case. None of the usual complications of following head operations with general anesthesia were noted. The following complications were considered and watched for without a single occurrence:

1. *Pulmonary:* Lung abscess, pneumonia (lobar or bronchial), bronchitis, infarct, embolism, pleurisy, emphysema, exacerbation of tubercular lesion, and atelectasis.

2. *Miscellaneous:* Excessive or severe nausea and vomiting, sensitivity to ether or avertin, acute otitis media, and acute pyelitis or cystitis.

Comparative Statistics

In reviewing the literature on the incidence of pulmonary complications following operations upon the nose and throat under general anesthesia, we found lung abscess not infrequent. Richardson² in 1912 first called attention to this complication when he reported 3 cases occurring after tonsillectomy. Manges³ in 1916 reported 10 cases seen in a single year, with one death and possibly a second. Six occurred during a period of 6 months, and 3 within 6 days. Tewksbury⁴ in 1919 found 15 cases following tonsillectomies in Washington during one year. Fisher and Cohen⁵ in 1921 reported 5 cases, and collected from the literature 71 additional cases, out of a total of 12,030 operations. Two of these cases

were operated upon under local anesthesia and 74 under general usually ether

Whitney,¹ using the suspension technic which requires the Davis-Crowe mouth-gag reported 8 000 cases of tonsillectomy without a resultant lung abscess. All of these cases were checked one month after operation both for the condition of the throat and for any pulmonary complications. Evans⁶ in a group of 16,500 cases done under nitrous oxide and oxygen (6,000 of these with addition of ether) had not a single pulmonary complication. St Clair Thomson⁷ in his textbook (third edition, 1927) states that in his 32 years of practice he has never seen a case of lung abscess following tonsillectomy and he thinks the condition is rare in England. Moore⁸ in analyzing 202 cases of pulmonary abscess states that it occurs once in from 2,500 to 3,000 tonsillectomies. On the other hand, Keiper⁹ places the ratio at 1 out of every 781 operations.

In discussing the etiology of lung suppurations, we find Lambert and Miller¹⁰ reporting the lowest incidence of lung abscesses resulting from tonsillectomy. In a series of 60 cases of lung abscess, 8 were secondary to tonsillectomy. Hedblom¹¹ in 1924 stated that in 692 cases of lung abscess observed at the Mayo Clinic 21 per cent followed operative procedures and of these postoperative abscesses 31 per cent followed tonsillectomy.

Fetterolf¹² after collecting approximately 950 cases of lung abscesses from the literature of the years 1919 to 1923 both in this and other countries found that almost 50 per cent of these occurred subsequent to tonsil removal. However, he feels that most statistical reports of lung suppurations following tonsillectomy are unenlightening and of little value unless the whole series is subjected to a painstaking and prolonged postoperative "follow up" system, otherwise many will be undiagnosed, incorrectly diagnosed, or the complicated case may not come to the attention of the operator.

It is because of the careful follow up which has been maintained from immediately postoperative to the present time and also because our group represents every general anesthetic case during the period covered that we feel that our series even though small is impor-

tant from the standpoint of complications.

When we refer to the pulmonary complications following general surgical procedures in comparison with those in the nose and throat alone, we find Cutler and Hunt¹³ asserting that 3.93 per cent (approximately 1 in 25) of the patients operated upon in a large surgical clinic in 1920 "developed a pulmonary complication that might be attributable to the operative intervention or the anesthetic."

Sise¹⁴ in 1927 showed the postoperative pulmonary complications for general surgical patients in the Middlesex Hospital for five years and the Lahey Clinic for two years, to be as follows:

	Per cent
Nitrous oxide—oxygen	1.8
Ether	3.1
Novocain	7.5

Whipple,¹⁵ in reporting the incidence of postoperative pneumonia, after general surgical operations at the Presbyterian Hospital, New York City, for a two-year period, gives the frequency as follows:

	Per cent
Nitrous oxide—oxygen	1.6
Ether	2.8
Novocain	3.1
(more often used in the poor risk patient)	

From a total of 97 cases of postoperative pneumonitis there were 25 deaths or a mortality of 25.8 per cent, showing the severity of this complication.

A review of 5,995 operative cases on the Second Surgical Division of the New York Hospital during the years 1924–28, when ethylene was coming into general use, showed 3.2 per cent with postoperative pulmonary complications. This group of cases consisted of all types of general surgery, including tonsillectomy.

Conclusions

(1) General anesthesia is as safe in allergic patients, even the severely asthmatic, as in other patients, provided

(a) The cases are properly selected and prepared, (b) an operative method is used which combines light anesthesia and carbon dioxide and oxygen hyperventilation with a minimum risk of pulmonary complications, (c) careful postoperative treatment is carried out with the assistance of an allergic physician.

(2) The method described in this paper

fulfills the requirements of safety to the patient, simplicity of technic, and comfort for the patient and operator.

(3) Pulmonary complications were entirely absent in this series of 204 cases of

tonsillectomy and radical antrum operations. There was one death from operative shock in an inactive tuberculous asthmatic patient.

525 EAST 68TH STREET

References

1. Whitney, E. L.: Suspension Method of Tonsillectomy in 8,000 Tonsillectomies, *J.A.M.A.* 47: 461, 1931.
2. Richardson, C. W.: Tonsillectomy With Consideration of its Complications, *Washington Medical Annals* 11: 85, 1912.
3. Manges, Morris: Occurrence of Abscess of Lung After Tonsillectomy with Report of 9 Cases in Adults, *Amer. J. Surg.* 30: 78, 1916.
4. Tewksbury, W. D.: Quoted by Fisher, Lewis and Cohen, A. J. (See Ref. 5).
5. Fisher, Lewis, and Cohen, A. J.: Pulmonary Abscesses in Adults Following Tonsillectomy Under General Anesthesia, *J.A.M.A.* 77: 17, 1921.
6. Evans, J. H.: Nitrous Oxide Oxygen Anesthesia for Tonsillectomy, *Penn. Medical Jour.* 33: 608, 1930.
7. Thomson, St. Clair: *Diseases of the Nose and Throat* (D. Appleton and Co.), Third Edition, p. 428, 1927.
8. Moore, W. F.: Pulmonary Abscess, An Analysis of 202 Cases Following Operative
- Work About the Upper Respiratory Passages, *J.A.M.A.* 78: 1279, 1922.
9. Keiper, G. F.: The Tonsil Question Up-to-Date, *Laryngoscope*, 21: 777, 1921.
10. Lambert, A. V. S., and Miller, J. A.: Abscess of the Lung, *Arch. of Surg.* 8: 446, 1924.
11. Hedblom, C. A.: Surgical Treatment of Acute Pulmonary Abscess and Chronic Pulmonary Suppuration, with Especial Reference to the Post-tonsillectomy Type, *J.A.M.A.* 83: 1577, 1924.
12. Fetterolf, George: The Nose, Throat, and Ear and Their Diseases, by Jackson, Chevalier and Coates, G. M. (W. B. Saunders Company) p. 317, 1929.
13. Cutler, E. C., and Hunt, A. M.: Post-operative Pulmonary Complications, *Arch. Int. Med.* 22: 449, 1922.
14. Sise, L. F.: Quoted by Evans, J. H. (see Ref. 6).
15. Whipple, A. O.: A Study of Postoperative Pneumonitis, *Surg., Gynec., and Obst.* 26: 29, 1918.

CLINICAL REPORT: THE TREATMENT OF TRICHINOMA VAGINALIS WITH "ANAYODIN"

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"Anayodin" has been used locally and orally in the treatment of trichinoma intestinalis and found to have a direct action against this organism and a curative and stimulative effect on the involved tissues. It was therefore thought that the same effect might be observed if it was used in the treatment of trichinoma vaginalis.

Chemically "anayodin" is an "iodoxyquinolinsulphonic acid," with an iodine content of about 28 per cent. It occurs in a fine crystalline light yellowish powder, which at normal temperature is soluble in water up to 4 per cent.

The procedure used was as follows:

The labia, vagina, and cervix were scrubbed with green soap and water, then thoroughly dried. The labia, vagina, and cervix were then painted with a 4 per cent solution of "anayodin." No douches were given between the treatments.

The treatments were given twice a week, then once a week and then before and after the menstrual period until no organisms

were found in a hang drop preparation on two successive examinations at intervals of one month.

Ten cases thus treated showed definite clinical improvement having two negative hang drop preparations for trichinoma at intervals of one month.

Two cases showed improvement with relapses with intercurrent infections.

All the cases occurred between the ages of twenty and thirty, four were married women and six were single.

All cases showed repeated smears negative for G. C. and hang drop preparations positive for trichinoma vaginalis.

The durations of the discharges on first examination were from five years to two weeks.

Slight improvement was noticed in all cases after the first three treatments.

The occupations of the patients were: five housework and five office work.

Six cases were in general good health and four were underweight.

140 EAST 54TH STREET

VACCINATION PRECEDING COLONIC OPERATIONS AS PROTECTION AGAINST PERITONITIS

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THE MAYO CLINIC ROCHESTER MINNESOTA

The purpose of the essay is twofold: first, to present a summary of some of the studies of experimental peritonitis and their possible clinical application, and secondly, to review briefly those factors which collectively represent the method that is used at present at The Mayo Clinic in the preparation of patients who are to undergo intestinal operations.

A cursory perusal of the literature on peritonitis reveals that many efforts have been made to prevent and also to treat peritoneal infections. Mikulicz more than fifty years ago gave vaccine, which was made of killed colon bacilli, to patients who were to be subjected to intestinal resection. This vaccine was administered intraperitoneally. Its use was discontinued because of severe reactions. Rixford, in an attempt to prevent peritonitis, used bacteriophage, pouring it into the abdomen at the completion of operation. He was encouraged somewhat by his results. Weinberg, of the Pasteur Institute, prepared two types of serum: one by immunizing horses with anaerobic organisms, and another by using colon bacilli. Both serums have been used and are being used at the present time in the treatment of active peritonitis. While it has been impossible to evaluate definitely the effect of such serums, good results have apparently been obtained in some instances.

Some interesting experiments have been carried out with peritoneal fluid and in the peritoneum, particularly with reference to their reaction to infection and sterile foreign matter. A small amount of free fluid is normally present in the peritoneal cavities of man and experimental animals. Its function has been described as that of a lubricant, but comparatively little attention was given to the study of its cellular structure until recently.

Maximow has described the type of cells that commonly are found in the

peritoneal fluid, but their variation in different animals and under different physiologic conditions has been studied only recently by Montgomery. He found that the number of cells in the peritoneal fluid of various animals, such as the white rat, white mouse, guinea pig, swine, dog, and horse, varied with the age of the animal. Others have observed that peritonitis is less likely to affect those animals, such as white rats, in which the cellular count of the peritoneal fluid is high, while in those animals which disclose a comparatively low cellular count the normal resistance to peritonitis is apparently less.

Durham, in 1897, carried out experiments with guinea pigs for the purpose of studying the reaction of the peritoneum to infection. He summarized the findings by saying that a leukopenia in the peritoneal fluid immediately followed the injection of killed bacteria. This condition was soon followed by a polymorphonuclear leukocytosis, and the predominating cell later was found to be a macrophage (monocyte).

The observations of Durham have been substantiated by Witts, and by Morton. The latter investigator demonstrated that if a filtrate of hemolytic streptococci, which first had been rendered sterile by passage through a Berkefeld filter, was injected into the peritoneal cavity of rabbits, death invariably occurred within a few hours. If the filtrate was boiled for thirty minutes and then was injected into the peritoneal cavity of rabbits immunized against subsequent intraperitoneal infections with hemolytic streptococci, invariably ensued. These experiments were repeated by using sterile solutions of dextrose, and dextrose in physiologic saline solution. Surprisingly enough, the animals were also found to be immune to intraperitoneal injections of hemolytic streptococci. A differential

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count of the cells of the peritoneal fluid disclosed that, at the height of immunization, the monocyte was the predominating cell and that it had replaced the polymorphonuclear leukocyte to a great extent. Morton then attempted to determine, if possible, the phagocytic action of the monocyte. It was found that the peritoneal fluid and omentum of animals, which apparently had been immunized against intraperitoneal infections, contained large numbers of large mononuclear cells (monocytes). The peritoneal fluid and the omentum of animals, which succumbed to the intraperitoneal injection of a bacterial filtrate, were found to contain very few monocytes but a large number of polymorphonuclear leukocytes. Morton therefore concluded that the monocyte was definitely more phagocytic than the polymorphonuclear leukocyte, and he also expressed the opinion that immunity to peritonitis might be established by inert substances.

Goldblatt and Steinberg were able to produce active immunization against *Bacillus coli* peritonitis in dogs by the intraperitoneal or subcutaneous injections of killed colon bacilli. The animals remained immune to peritonitis from this organism for three months.

The exact nature of a fatal peritonitis, whether it is produced in the experimental animal or affects a human being, subsequent to an abdominal operation, is not yet understood.

David, in 1927, studied experimental peritonitis of animals. Dogs were used. He demonstrated that colon bacilli passed directly from the peritoneum to the bloodstream and to the lymphatics. If plastic peritonitis was first produced by the intraperitoneal injection of an emulsion of turpentine, colon bacilli that were injected into the peritoneal cavity could not be recovered from the bloodstream or from the thoracic duct. A repetition of the experiment following the production of a low-grade peritonitis occasionally did show colon bacilli in the lymphatics, but rarely were organisms recovered from the bloodstream. By analogy, he concluded that if death resulted from a well-developed peritonitis, its cause could not be attributed to septicemia. While this moot question may not yet be answered, our clinical observations thus far bear out

David's experimental findings, by the fact that repeated blood cultures in cases of fatal peritonitis invariably have been negative.

Rixford and Dixon, in 1934, studied the cytology of the peritoneal fluid of man. They endeavored to determine the normal cellular structure and also the variations which occurred after the intraperitoneal administration of colon bacillus and streptococcus vaccines. The method of obtaining the fluid has been fully described in a previous publication. Suffice it to say that the normal peritoneal fluid of man contains in the neighborhood of 2,300 leukocytes per cubic millimeter. About 45 per cent of these are histiocytes (monocytes); very few are eosinophils and basophils, and many are lymphocytes. After the intraperitoneal injection of vaccine, the total cell count is increased at least tenfold. At first, there is an increase in the neutrophils; later, there is a marked increase in the histiocytes (monocytes). We were of the opinion that at least a part of the protection against peritonitis, which results from the use of vaccine, was the result of non-specific production of phagocytosis, which was caused by an increase in the number of monocytes.

Recently, Young and Marks have suggested the preoperative use of the intraperitoneal injection of amniotic fluid as a preventive measure against peritonitis that follows operations which involve the large intestine. In a series of 49 cases in which this preoperative treatment was carried out, the mortality from peritonitis was 2 per cent, whereas the mortality from peritonitis in a comparable number of intestinal operations, which were carried out during the same period at the Massachusetts General Hospital, was 38 per cent. Their clinical use of amniotic fluid was antedated by experiments in which a few cubic centimeters of the substance was injected into the peritoneal cavity of guinea pigs. In these studies, they found that the cell count of the peritoneal fluid rose from 200 to 5,800 per cubic millimeter in six hours.

Our experience with the clinical use of amniotic fluid has been rather limited. Thus far, amniotic fluid has been employed in only twenty-five cases. This number is obviously too few to test the

value of the procedure. We have found, as did Young and Marks, that patients thus treated had no increase in temperature. Some had severe abdominal cramps, which required rather heroic doses of morphine. There was an increase in the number of leukocytes in the blood. The exudate that was found in the peritoneal cavity of the patients, following the injection of amniotic fluid, was of a gelatinous consistency; therefore, an accurate cell count was rather difficult. If amniotic fluid is used, it should be injected, according to Young and Marks, about six hours before operation, because the height of peritoneal reaction is reached at this time. It will be recalled that, in experimental peritonitis, it has been demonstrated that the cells which apparently have the greatest phagocytic action, i.e., the monocytes, do not dominate the picture until forty-eight to seventy-two hours after the vaccine has been administered. It is to be kept in mind, therefore, that regardless of how the peritoneal reaction is produced, it would seem that two or three days would be required for a satisfactory reaction to be established.

Herrmann, working on this problem, under Mann, in 1927, at The Mayo Clinic, produced peritonitis in rabbits and dogs by the intraperitoneal injection of colon bacilli and streptococci. He found that the development of peritonitis depended on the presence of immunity. Peritonitis, he postulated, was a defensive reaction of the tissue; the form of immunity which determined peritonitis was a local immunity of the peritoneum. He expressed the opinion that sufficient immunity would entirely prevent peritonitis, and that the bacteria would be destroyed rapidly and completely in the animal which was immune. Without immunization against the prevailing bacteria, i.e., streptococci and colon bacilli, peritonitis would result in death from acute sepsis, and there would be little or no peritoneal reaction. If animals, which did not receive injections of vaccine, received lethal amounts of virulent cultures of these bacteria, they all succumbed to a generalized peritoneal infection. He also found that if a vaccine, which was prepared from colon bacilli and streptococci, was injected intraperitoneally, operations such as resec-

tions of the intestine could be carried out almost with impunity and without fatal peritonitis, whereas if such operations were performed without vaccine, the mortality associated with peritonitis was high.

So striking were the results of these experiments that we decided to vaccinate patients before they were subjected to resection of the colon, in order to prevent postoperative peritonitis. Bargaen has found that the organisms, which were most prevalent in the abdomens of individuals who had succumbed to peritonitis following colonic operations, were colon bacilli and streptococci. A vaccine, which has been prepared from these organisms, has been injected intraperitoneally three days before patients have been subjected to intestinal resection. The materials which are required for such a procedure are a dull-pointed spinal puncture needle, a 10 c.c. Luer's syringe, procaine hydrochloride for a local anesthetic, a 1 c.c. Luer's syringe for the injection of the anesthetic, and cleansing fluids for the skin. The injections are given directly into the peritoneal cavity by strictly aseptic technic. Since October 1, 1928, more than 1,500 patients, who submitted to operations which involved the colon, received intraperitoneal injections of this vaccine before operation, to protect them against peritonitis.

About ten years ago, Sistrunk, who was greatly interested in colonic surgery, expressed the opinion that patients who were to undergo intestinal resection, should be placed in the hospital a few days prior to operation in order that the intestine might be thoroughly emptied. His plan of preoperative treatment consisted mainly of a liquid diet, which contained a large proportion of carbohydrates; the intestine was cleansed with rectal irrigations and mild cathartics. He believed that patients who were managed in this manner made a more uneventful convalescence than patients who were subjected to operation the day following hospitalization. Technically, the resection of a segment of intestine is greatly facilitated if the contents are reduced to a minimum.

In addition to the administration of vaccine, the dietary regimen has been greatly elaborated and plays an important

part in the preoperative treatment (see table).

TABLE
*Non-Residue Diet Before Operation **

Breakfast
Fruit juice, any kind, 1 glass
Heavy cream, 4 tablespoonfuls
Egg, 1
Butter, 1 square
Arrowroot cookies, 2
Coffee †
9:00 A.M.
Candy, 5 ounces, either pure sugar candy or milk chocolate without nuts
Dinner
Broth with 1 square of butter
Gelatin, plain, 2 heaping tablespoonfuls
Heavy cream, 4 tablespoonfuls
Fruit juice, any kind, 1 glass
Arrowroot cookies, 2
Tea or coffee †
3:00 P.M.
Fruit juice, any kind, 1 glass
Supper
Broth with 1 square of butter
Steamed rice, 2 heaping tablespoonfuls †
Heavy cream, 4 tablespoonfuls
Fruit juice, any kind, 1 glass
Arrowroot cookies, 2
Tea or coffee †

* Contains approximately 2,300 calories.
† Sugar as desired for tea, coffee, and rice.

Since we have employed this plan of management of patients who are to undergo operations which involve the colon, the mortality from postoperative peritonitis has been reduced by 66 per cent; that is, where we previously lost three patients from peritonitis, one now succumbs. This decrease in mortality can hardly be looked upon as the result of any factor other than the preoperative care. It seems that in those cases in which fatal peritonitis develops, the offending organisms are virulent types of

streptococci, the exact nature of which we have not yet been able to determine.

We have made careful study of the reactions which have followed the injection of the vaccine. In all instances, a sharp elevation of temperature occurs; this ranges up to 102°F., and occasionally higher. In cases in which there is a neoplasm of the colon, which has caused perforation of the intestine, or which has metastasized, the temperature curve is almost diagnostic if the patient has received an intraperitoneal injection of vaccine. The temperature recedes in a gyrating fashion and returns to normal twenty-four to thirty-six hours after the injection of the vaccine.

We are convinced that intraperitoneal vaccination against peritonitis, in addition to the other phases of the preoperative management, has appreciably reduced the death rate from peritonitis. It seems to us that further study will be necessary before it can be definitely said that immunity against peritonitis can be produced by inert substances. It may be, however, that such substances as physiologic saline solution, dextrose, and dextrose and amniotic fluid will produce the same results as we believe we have obtained with the use of vaccine. We are now carrying out investigations in an attempt to determine whether or not the blood serum of a patient who has received the intraperitoneal injection of the vaccine of colon bacilli and streptococci will show an agglutination to the specific organisms. Agglutination tests for streptococci are unreliable. However, we hope to compare the efficacy of the vaccine to the inert substances with this method.

For several years we have collected bacteria from all fatal cases of peritonitis. We have attempted to immunize horses with these organisms, in the hope of developing a serum, which we hope may help in combating the infection that is associated with peritonitis, and in reducing fatality in that small group of patients who still die of a virulent infection.

"CURE-ALLS"

The Federal Food and Drug Administration reports numerous seizures of worthless "cure-alls." One product, seized in Idaho, was labeled: "Recommended for blood poison, infections, removing splinters, step-

ping on rusty nails, dog bites, croup, bronchitis, swollen glands, sore throat, rheumatism, lumbago, eczema, piles, boils, burns, warts, varicose veins, old running sores, etc."

PUBLIC HEALTH ASPECTS OF A VENEREAL DISEASE PROGRAM FOR NEW YORK CITY

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NEW YORK CITY

To outline the public health aspects of a venereal disease program for New York City means to deal with the biggest single problem facing the Department of Health. This question is now receiving serious consideration from myself and my associates at the Health Department. If there are two public health problems in which our Mayor is more interested than in others, they are the so-called venereal diseases and tuberculosis. With the support of the present administration, of the medical profession, and of the health and welfare agencies of the city, we hope to begin an intensive attack against these so-called venereal diseases in order that they may, in time, at least be reduced from major to minor problems.

As a step in this direction we are planning intensive programs in this field in several areas of the city, and the Health Department's administrative activities dealing with the control of venereal diseases, now lodged in a special division of the Bureau of Preventable Diseases, will shortly be transferred to a new bureau so that this important work may be extended and intensified.

It is the function of the public health officer to work for the prevention of premature death and disability in whatever form they may threaten. I need hardly say that the control of mortality among infants and the prevention of deaths from tuberculosis, diphtheria and other infectious diseases have been in the forefront of our program. This work has borne good fruit, and during 1934 we had the lowest death rate from tuberculosis and the lowest case rate from diphtheria in the history of the city. Without suggesting in the least that we should relax our efforts in these fields, which we should not and will not do, the fact remains that deaths from these diseases, although still an important factor in mortality, have been greatly

reduced, and the major causes of present-day mortality center around heart diseases, cancer, the pneumonias and accidents.

That is what the uncorrected or crude mortality returns tell us; what they do not tell us is that syphilis is unquestionably one of the four major causes of death. They do not tell us this because the true prevalence of syphilis is not revealed by the available statistics, nor is the havoc it wreaks disclosed by records of morbidity and mortality. From careful research that has been made and from the clinical experience of such syphilologists as Profs. John H. Stokes, Joseph Earle Moore, and others, we know that so great is the power of this single disease as a cause of destruction that a revision of mortality statistics in the light of what is now known about the extent of syphilis places it conservatively as one of the first four major causes, if not the first.

It has been estimated that there are in the United States at the present time about 6,000,000 sufferers from this disease. Of these, something over 500,000, according to the census surveys by the United States Public Health Service—*about one case in 9*—are under treatment by authorized practitioners. In New York City alone, during the year 1934, a total of 46,276 cases of syphilis was reported, an increase of 9.5 per cent over the previous year.

Syphilis is a disease of which the cause and cure are known, and thus it is possible to build up a broad preventive program. Yet very little progress has been made in controlling this disease. During the 5-year period, 1930-34, there were more cases of syphilis reported to the Department of Health of New York City than of any other communicable disease. In fact, during 1934 there were almost as many cases of syphilis reported as of all other cases of reportable infec-

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tious diseases combined, exclusive of pneumonias and gonorrhea, and 10,000 more of syphilis and gonorrhea than of all the other cases of reportable infectious diseases such as tuberculosis, diphtheria, measles, scarlet fever, chicken pox, typhoid fever, whooping cough, poliomyelitis, and so on, and exclusive only of pneumonias. These figures may appear high, but in reality they probably represent only a percentage of the total number of new cases of syphilis which develop each year. Moreover, a very large number of the diseases of the cardiovascular system and many others with non-committal labels are due to syphilis.

The present status of reporting of syphilis in New York City is not satisfactory. Most of the cases reported come from laboratories and hospitals and only a small percentage are reported directly by private physicians. I want to emphasize the importance of having a uniform system of reporting throughout the country. I want to join with such an expert as Dr. Moore of Johns Hopkins in urging that such a system of uniform reporting be devised, with the help of the Surgeon-General's office and of the medical profession. Only then will we be able to know more accurately the status of this problem. As it stands at the present, we have to rely on guess work.

The whole program of the control of the venereal diseases, as Dr. Parran has rightly expressed it, is comprised of two "musts": (1) Every infected person should take treatment immediately after infection; and, (2) facilities for the diagnosis and treatment of syphilis and gonorrhea must be available.

To elaborate on this, one should consider, first and foremost, the *educational work*, including instruction of the public by every available method; specific education of the patient on the need of continuing treatment; training of the necessary personnel of physicians, nurses, and social workers.

Secondly, it should be mentioned that it is up to us to insure *adequate medical service* for early diagnosis and complete treatment, including laboratory diagnostic facilities, dark field examinations, and clinical services.

We are especially anxious that all who need treatment should go to their private physicians, but for those who are unable financially to do so, the city, through its clinics and otherwise, must make special provision. For the Department of Health is responsible for the public health of the people of the city.

Thirdly, *epidemiological measures* are needed and these should include intensive inquiry into early cases to determine the source of infection; e.g., examination of contacts in families and elsewhere.

Fourthly, *adequate nursing assistance and medical social service* should be available for the purpose of returning lapsed cases for treatment and to do judicious education of the family.

These are a few of the main aspects of a venereal disease program for the City of New York. As a step in this direction, as I stated before, we are now starting an intensive district program. But more needs to be done, and I hope that next year there will be more money available for venereal disease work.

As stated above, we are planning to carry on an intensive district venereal disease project. But a great deal of work, in addition to the valuable educational work rendered by the physicians of this city, is now being carried on by the Department of Health. In co-operation with the organized medical profession and health and welfare agencies of the city, during the month of February of this year we conducted an intensive educational effort against congenital syphilis. The three-fold aim of this effort was: (1) To impress expectant mothers with the necessity of consulting their physicians early in the course of pregnancy; (2) to arouse a greater appreciation on the part of the public that the continued deaths of babies from syphilis is inexcusable because it is preventable; (3) to appeal to all physicians of the city to make the Wassermann test on pregnant women under their care. Various methods of spreading information were employed, such as lectures for public and professional groups, mothers' clubs, midwives, and others. Literature on the subject was distributed.

This educational effort brings me to the question of the radio and the part it can play in this type of work. We

are now using the platform, the movie, the exhibit, the pamphlet, and the press. We need, in addition, the radio. We want, through the radio, to bring the people a constructive, positive message—not to scare them with gruesome tales. We do not think of these diseases as the "wages of sin" or as a "badge of immorality." They are medical and sanitary problems.

A few weeks ago I had the privilege of discussing with the representatives of two important radio companies the question of broadcasting talks on the venereal diseases. They explained very courteously the difficulties involved in this problem and stated that the public would not approve that the radio be used for educational work in this field. I then made a suggestion, which I repeat here. Why not broadcast one carefully-worded talk on this subject over one or preferably both of our major networks and find out whether the public really feels that this taboo should be continued? The talk could be arranged at an hour (10 00 or 10 30 P. M.) when children are or should be in bed. This would not be exactly experimenting with something which has not been tried before.

To give only a few instances, in Boston a series of talks on gonorrhea and syphilis were broadcast over stations WBZ and WEEI by the Health Department of Massachusetts. In New York City, at least two stations have broadcast on this subject. A radio station in Rochester recently broadcast an address by Dr. Joseph L. Moore on "Syphilis and Marriage"—all these with apparently no detrimental effects to the public or to the stations. I hope that radio executives will soon come to recognize the great opportunity they have to advance public health by giving this question a fair trial.

I realize that the radio stations are faced with great difficulties and that there is need for a policy concerning the broadcasting of fraudulent and scandalous matter. I am sure, however, that no one would maintain that syphilis and gonorrhea come within this category, and I am far from convinced that without a fair trial it can be stated that the radio public will not stand for educational talks on these subjects. A sincere

and tactful speaker would not deal with them in a vulgar or suggestive way, for that would defeat his own purpose. Only a few years ago, the New York City newspapers refused to print news on syphilis or gonorrhea. The press in New York City now carries news on this important health problem with apparently no harmful effects to their reading public.

Some radio program directors state that for the present this subject cannot be broadcast because the public will object on the grounds that there are children among those listening. Of course, it has been pointed out that some of the commercial programs to which children listen now are not always of the highest caliber. I personally feel that the radio is rendering valuable service, but I venture to suggest that it is vital that, like education, "it adjusts itself to a changing world."

With this in mind, I wonder what our friends of the broadcasting stations would think of having an advisory committee on educational (*non-commercial*) public health problems. This committee should not be responsible for reading or censoring talks. Its function should be to sit down from time to time with the radio executives and discuss with them public health problems which deserve special emphasis over the radio.

I would like to know whether they think that it would be of help to have such a committee and, if so, whether they would like to ask the New York Academy of Medicine, the Coordinating Council of the Five County Medical Societies of Greater New York, and the Department of Health (and if a national body is requested, the Surgeon General's Office, the American Medical Association, and the American Public Health Association) to appoint one representative each to serve on such a body. This should carry with it no obligation on the part of the radio people, and I feel would give the public health people a better understanding of the difficulties the radio faces, and the radio executives a better idea of the public health problems which await solution and how the radio can best be of assistance. I mention this as a suggestion.

The discovery of popular education as

an instrument in preventive medicine, particularly by the pioneers in the tuberculosis movement, has been compared by Professor Winslow "with the discovery of the germ theory of disease" and, he added, "it has proved almost as far-reaching in its results." Why then not use it in the case of such diseases as syphilis and gonorrhea?

Summary

In order to eradicate these diseases we need, first, medical provision for its victims. It is up to us as public health workers to see that every infected person is treated, preferably by his or her private physician.

Apart from medical provision, a more efficient national reporting system should be devised which will make it possible to know more accurately the extent of this problem. Laboratory facilities should be adequate. The epidemiological service should be developed to its fullest extent. Health education should be conducted

on a very intensive and permanent basis. This concentrated attack against the venereal diseases should be carried on by the Department of Health in close co-operation with the medical profession, the voluntary health and welfare agencies, the clergy, the press, the radio, and so on.

As a method of focusing the attention of the public and dramatizing the subject, it has been suggested that a special month be set aside each year, just as in the case of tuberculosis, to carry on throughout the country active and intensive health education against the venereal diseases. I am not sure as to the merit of this suggestion, but I am simply pointing to it as an idea to be considered. The medical profession as well as the voluntary agencies have played an important part in reducing the death rate from tuberculosis. They can play just as important a rôle in the control of syphilis.

139 CENTRE STREET

STARTING CANCERS TO LEARN THEIR CURE

Three chemical compounds, recently discovered in London, which will artificially produce cancer wherever dropped on the skin were described on April 17 at the twenty-eighth Annual meeting of the American Association for Cancer Research at the Cornell University Medical College, York Avenue and Seventieth Street. The discoveries are particularly valuable in the artificial stimulation of cancer growths in the laboratory, so that study of malignant tumors may be made from their earliest inception.

The chemicals are Dibenzanthracene, Dibenzpyrene and Methyl-cholanthrene, all discovered by Dr. J. W. Cook, of the London Cancer Hospital.

In a paper by Drs. Otto F. Krehbiel and Cushman D. Haagensen on the "Significance of Variations in the Morphology of Sarcomas produced by Dibenzanthracene," it was brought out that all types of cancer can be artificially produced in rats, mice and rabbits by application of a small quantity on the skin.

So powerful is this chemical, which is a simple hydrocarbon not found in nature, that doctors and laboratory assistants who handle it treat it with the greatest respect, wearing rubber gloves, seeing to it that no drop touches their skin, and burning everything which comes in contact with it. The

experimental animals are carefully incinerated after study.

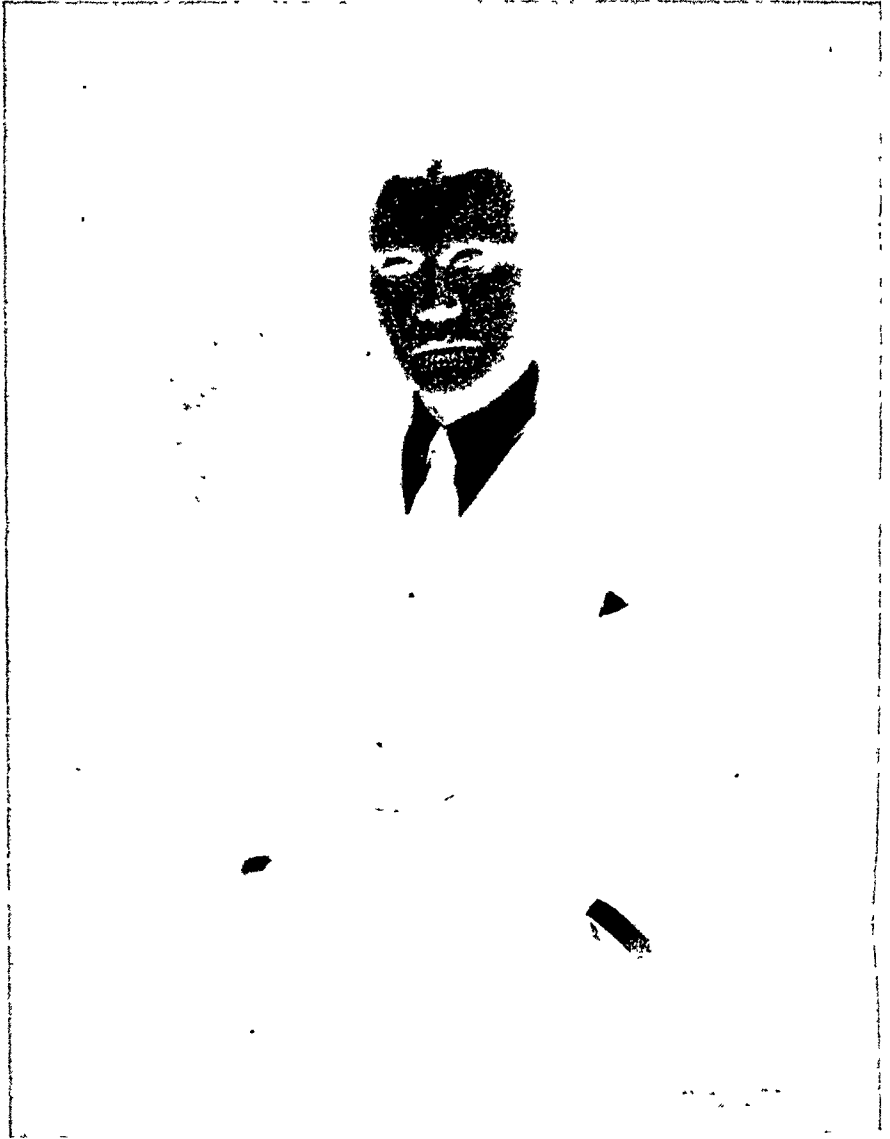
Drs. M. C. Reinhardt and C. F. Candee, of Buffalo, as well as Dr. Charles F. Branch, of Boston, read papers in the morning session on the reactions of the three chemicals on animal tissue.

A significant factor of the discovery is that the earliest control of artificial cancer production by use of one or more of the three chemicals will enable doctors to study malignant growths from their inception, a thing rarely possible either with persons, who seldom recognize the first symptoms and call for medical aid, or with laboratory animals. Physicians are hopeful that chemical changes in the cell can be observed at the beginning of a neoplasm, which would give a clew to the greatest medical enigma of the day.

"What are you taking for your dyspepsia?"

"Make me an offer."—*Boston Transcript*.

A new law in Colorado makes it unlawful for any person to receive hospital care with intent to defraud the hospital of the amount due it for such service and also making it prima facie evidence of intent to defraud for a patient to leave a hospital without paying his bill.



Wm. L. Smith

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EDITORIALS

FREDERIC EWALD SONDERN

President of the Medical Society of the State of New York

A distinguished medical historian has drawn attention to a singular fact in medical development, in brief, scientific medicine has always advanced as the result of fundamental discoveries in the physical sciences. In like measure, it would be strange indeed if the practice of medicine did not react from changes in the social world. Medical practice has undergone startling changes when viewed with objectivity, and practice today is determined in no small measure by the concentration of people in urban centers and by the remarkable facilities for transportation. It is reasonable to suppose that the future will witness further evolutionary changes in the science and art of medicine and in the practical application of medical knowledge. It is a significant period in medical history in which to become President of the Medical Society of the State of New York.

Frederic Ewald Sondern was born in Stuttgart, Germany, March 30, 1867. His parents were naturalized Americans and had lived for many years in New York City previous to Dr. Sondern's birth. His early education was obtained in the public schools of the City of New York. He graduated from High School in 1883 and spent the succeeding three years at the

Universities of Tübingen and Heidelberg. Dr. Sondern enrolled in 1886 in the College of Physicians and Surgeons under the preceptorship of Dr. Henry B. Sands. He graduated in medicine in 1889 and was a member of the interne staff of the German Hospital (now the Lenox Hill Hospital), in the City of New York.

It was during these formative years that Dr. Sondern became a protégé of the late Dr. Abraham Jacobi, for on leaving the German Hospital he was intimately associated with Dr. Jacobi in his private practice for six years. It was during this period that Dr. Sondern obtained his wide clinical experience, for he held successively the position of physician in the Out Patient Department of Mount Sinai Hospital and a similar position in the Department of Pediatrics in the Vanderbilt Clinic.

In 1885 von Bergmann invented the steam autoclave which was the beginning of the era of aseptic surgery. The great and fundamental discoveries of Lister were to continue to about 1890 when the era of aseptic surgery became dominant. The science of clinical pathology was being developed and a new type of clinical medicine was being written. The contributions in the field of hematology, bac-

teriology, and biochemistry were fundamental and changed the entire conception of medical practice.

In 1898 Dr. Sondern found his metier in the field of clinical pathology and devoted himself exclusively to clinical pathology. He became Professor of Clinical Pathology at the New York Post-Graduate Medical School and Hospital and in 1917 became president of the same institution and served in that high office throughout the World War. He served successively as Clinical Pathologist at the Roosevelt Hospital and at Bellevue Out-Patient Department for many years and was Director of the Clinical Laboratories of the New York Lying-in Hospital from the opening of their new building at Second Avenue and Sixteenth Street until its closure, in 1933. During the years of his practice in clinical medicine and later in clinical pathology he was active in the various departments of organized medicine.

A member of the New York Academy of Medicine throughout his entire professional life and at present a Trustee of that institution, he served on almost every committee of the Medical Society of the County of New York and became its president in 1916. He is a member of the American Society of Clinical Pathologists and a former President. He is a member of the International Society of Urologists, American Society of Pathologists and Bacteriologists, the American Immunologists, New York Pathological Society and the New York Clinical Society.

Dr. Sondern's greatest contribution to organized medicine has been to the Medical Society of the State of New York. He represented the State Society as delegate to the American Medical Association on many occasions and has been identified with the thought of the Society for the past twenty-five years. He was one of the proponents of the Medical Practice Act and served with rare distinction as Chairman of the Committee of Experimental Medicine and was a loyal and valuable member of the Society

and largely instrumental in successfully preventing the passing of legislative acts prohibiting animal experimentation. His particular pre-eminence was exhibited in his courage, foresight, and meticulous attention to the investments of the Society during his tenure as its Treasurer. His wisdom and resourcefulness on the Budget Committee and as Chairman of the Insurance Committee, and the successful conclusion of his work on the JOURNAL Management Board further demonstrated his remarkable organizing ability.

If a witness were to be summoned to testify to Dr. Sondern's constructive statesmanship no better one could be brought before you than the present JOURNAL from which you read these lines, in the re-organization of which he played a prominent part.

The future is veiled in obscurity and no one dares to predicate under what pattern medicine may be practiced in the years before us. To a difficult office Dr. Sondern brings an unusual, ample experience, charm of manner, courage and a remarkable ability for clear, concise thinking. The quality of his friendship is known to most of the members of the State Society. He inspires friendship, loyalty, and commands the respect of those who may disagree with him on policy. It is a great source of satisfaction to know that the diverse activities of the Medical Society of the State of New York are in hands so well trained, so patient, and so capable.

One-Sided Education

The friends of obligatory prepayment for sickness cannot be denied the right to secure time on the air and broadcast their theories. When they attempt to conceal their one-sided propaganda beneath the cloak of education, however, they are guilty of a serious and dangerous deception. These are the instructional methods of dictators, and not of educators.

The Advisory Council on Radio in Education, having finished its first episode

in propaganda masquerading as education, when the series "Doctors, Dollars and Disease" ran its course, now announces a new series concerned with how the consumer may get "more for his money." Of the nine programs, four will be delivered by the agents of philanthropic foundations interested in forcing compulsory health insurance upon our people.

We can about guess how Michael M. Davis and C. Rufus Rorem will advise the public how it may get "medical care for less money." Who cares as to the quality of the medicine, the propagandist sayeth not!

We protest this misuse of the educational facilities of the radio, in the name of the radio audiences in general, and in the name of the profession in particular.

The Advisory Council on Radio in Education has forfeited its rôle as an educational body.

Another Advance

Michigan continues to bring forth new and interesting experiments in medical relief. The system of the Oakland County Emergency Welfare Administration, described recently in the *J.A.M.A.*, goes a step beyond other plans by eliminating intermediaries between doctor and patient. A needy person receives immediate care on presenting his physician with a card stating that he is on relief. The practitioner reports to the administration on treatment given within a week and is paid within a month.

The elimination of social service investigation of requests for medical service prevents unfortunate incidents like that which occurred recently in New York City when a baby died before a physician was sent by the Home Relief Bureau. Early care frequently means shorter care, as witness the fact that the new Oakland plan has cost less than previous relief methods. Special regulations deter patients from making excessive demands for service; and an advisory committee of the County medical society adjusts all medical disputes. As always when the

profession is vested with responsibility for professional affairs, there have been few abuses of public confidence.

The Oakland plan is unique in its differentiation between medical and social problems. The most severe and valid criticisms of relief in New York State have grown out of the domination of this field by professional welfare workers who approach all questions from the social service standpoint. Much of the strength of the Oakland system lies in its recognition of the fact that "social problems are one thing and medical problems another," demanding special training and experience in their respective spheres.

Mr. Kingsbury Departs

For several years, as reported in the *New York Herald Tribune* of April 20, Mr. Kingsbury has expressed approval of socialized medicine as practiced in Russia, and has advocated the adoption of a similar health insurance plan in the United States. Mr. Albert Milbank, the President of the Milbank Memorial Fund, on the other hand, has repeatedly made pleas for the substitution of co-operation for antagonism between organized medicine and the endowed health foundations. In a recent address he said: "The Fund over which he presides had never gone on record as an out and out proponent of schemes to socialize medicine, but that it had confined itself to basic studies on the proposition."

The exit of Mr. Kingsbury will make it easier for organized medicine and the Milbank Fund to work in collaboration on any undertaking consistent with the scope and capacity of both organizations. They have a common goal in their mutual interest in the public welfare. Could not other foundations follow the example of Mr. Milbank, and rid themselves of dreamers, who at any costs are endeavoring to foist their pet ideas upon medicine, irrespective of what the results will be to the public and to the quality of medical care which the public will get, if their dreams can be made to come true?

For Political Strength

Although the State legislative session has just ended, it is not too early to speak of organization for effective political action in the future. Congress is still in session; and while it is not likely to enact any legislation embracing compulsory sickness insurance this year, no one knows how far the national social security program will ultimately go. Albany saw one health insurance bill in 1935 and 1936 will undoubtedly bring forth another. The time to build strong defenses is before an attack is launched.

Organized medicine, through the A.M.A. and State and County medical associations, represents the profession as a whole in legislative controversies. This unified action would be greatly strengthened if physicians utilized the political weapons within their grasp as individual citizens.

In New York City a group of Democratic practitioners have organized to enlist the support of their party for medical principles. This association works through the district Democratic clubs. Its members have established contacts not only with their representatives at Washington and Albany but with the district leaders who exert a strong influence on all elective officials. These alert physicians are making politicians in their community realize the latent political force of their profession.

Similar programs initiated all over the State would put the profession in a much stronger position to resist legislative encroachments. It would not be necessary to carry them out through any one party.

There is no reason why Republican practitioners should not organize as effectively as the Physicians Democratic Association. In small communities, where the local doctors are well known, they should be able to exert even more influence than in a city like New York. The profession must offer more than passive resistance to the social and economic nostrums that threaten to destroy it.

A New Antityphoid Serum

With the remarkable decrease in the incidence of typhoid fever which has followed the introduction of typhoid vaccine as a prophylactic measure, the isolation of a curative serum might seem, upon first thought, to be a superfluous addition to our therapeutics. Nevertheless, the numerous localities wherein the disease still constitutes a problem in therapy, and the not infrequent sporadic epidemics which crop up despite all hygienic precautions, make welcome the experimental and clinical findings of Felix and his co-workers.

In experiments on mice, Felix¹ and Pitt² found that antityphoid serum containing O and Vi antibodies exerted the following effects. Protection against infection with highly virulent strains of typhoid bacilli was afforded by the Vi antibody, while the O antibody neutralized the effects of the endotoxin. This serum was then put to clinical trial in the various hospitals throughout Palestine, and control cases were also treated with normal horse serum. The most notable effect of the antityphoid serum in humans suffering from all degrees of typhoid fever was the marked and rapid reduction in the toxic symptoms. While the pyrexia was affected to some extent, it was not a constant feature following the intravenous or intramuscular injection of the serum.

The number of cases thus far treated, forty-three in all, is too small a group from which to draw conclusions as to the effect of the antityphoid serum in the reduction of the death rate from this disease. The clinicians who have used it feel, however, that many of their patients would have succumbed had it not been for the timely use of this remedy. In any event, it seems evident that toxicity and the duration of the fever can be considerably reduced by the early administration of the antityphoid serum.

¹ Felix, A., and Pitt, R. M.: *Lancet* 2:186, 1934.

² Felix, A.: Clinical Trials with a New Antityphoid Serum, *Lancet* 1:799, 1935.

Diagnosis of Metallic Poisoning

Those, whose work places them in contact with deleterious metallic or non-metallic elements and their salts which are used in some of the industries, are constantly being subjected to the dangers of absorption with a resultant acute or chronic poisoning. It is known, however, that individuals differ in their susceptibility to drugs and the early determination of a person's predilection for a poison becomes invaluable in lessening industrial hazard and forestalling organic changes due to slow poisoning.

The future victim of chronic plumbism, argyria, and so on, never presents himself until the clinical picture is fully established and a compensable lesion is indisputable. The work of Pribram¹ is, therefore, a welcome addition in the field of industrial medicine, since it renders possible the earliest detection of minute quantities of metallic salts in the body. He finds that the chemical equilibrium of the blood plasma is disturbed by the smallest amount of poison long before clinical manifestations of its presence are noted.

A definite relationship exists between the colloids and crystalloids in the blood serum; in normal blood, the colloids are able to combine with the crystalloids

dextrose, urea, and phosphorus (as phosphates) in certain definite proportions. One hundred c.c. of normal blood will combine with its colloids 75 per cent of 120 mg. of dextrose injected into it. Similarly, 30 to 50 per cent of urea (30 mg. per 100 c.c. of blood) and 90 to 100 per cent of phosphorus as phosphates (3 mg. per 100 c.c. of blood) will be taken up by the colloids in normal blood.

The chlorides of lead, mercury, and arsenic, in concentrations of as little as 1-100,000 of blood, definitely diminish the combining power of serum for these crystalloids. Chloride of iron, on the other hand, increases the combining power of blood colloids for dextrose, urea, and phosphorus.

The practicability of Pribram's findings lies in the fact that the industrial surgeon now has a means of determining an individual's susceptibility to poisonous chemicals. Following the addition of crystalloids to the blood in proper proportion, he can determine by routine chemical methods whether or not the colloidal combining power of the blood is decreased or increased. In this manner, workers may be saved the prospect of future chronic invalidism, while the employer would very early be freed from a compensable industrial calamity. While this method does not actually isolate the poison, it nevertheless detects its presence in the smallest quantities by determining the effect upon the hemic chemical equilibrium.

¹ Pribram, E. A.: Early Diagnosis of Industrial Diseases (Metallic Poisoning) by Microchemical Blood Examinations, *Arch. f. Gewerbe-path. u. Gewerbehyg.* 5:345, 1934.

MEDICAL LIBRARY ASSOCIATION TO MEET IN NEW YORK

The Thirty-seventh Annual Meeting of the Medical Library Association will be held in Rochester, New York, June 17 to 19, 1935. Sessions will be held at the Rochester Academy of Medicine and the University of Rochester Medical School.

The program includes addresses, round table discussions, and demonstrations on library procedure, medical history, and medical literature.

The Association is being represented by two delegates at the Congress of the International Federation of Library Associations to be held in Madrid, May 19 to 30. These delegates will return in time to report upon the Congress at this meeting.

This Association consists of about 175 of the medical libraries of this country and Canada, together with their librarians and a group of supporting members of physicians interested in the advancement of medical libraries.

The officers of the Association are: Charles Frankenger, president, Brooklyn, N. Y.; Louise Ophüls, vice-president, San Francisco, Calif.; Frances N. A. Whitman, secretary, Boston, Mass.; Mary Louise Marshall, treasurer, New Orleans, La.; Marjorie J. Darrach, Chairman of Executive Committee, Detroit, Mich.

All interested in the development of medical libraries are invited to attend.

Current Comment

Diphtheria morbidity and mortality rates seem to offer a fairly sound test of the quality of medical service received by a community. . . . Diphtheria death rates vary directly with the extent to which these known and tested method of prevention and treatment are made available to the population. This situation furnishes conditions, almost laboratory in type, from which to determine the value of a medical service.

The arguments for sickness insurance may be summed up in the claim that it removes the economic obstacles to the giving of medical services, and thereby secures a wider and more effective distribution of that service.

The League of Nations has assembled the reported diphtheria cases from 1923 to 1933 for a number of countries. It is evident from this (Tables published in *J.A.M.A.*) that the variations in the number of cases between countries, or in time within any country, bear no relation whatever to the existence of insurance, unless it is a negative relation. *The number of cases has increased in Germany and Austria, where the insurance system extends to the family, and also in England and Wales, where families are not included.* The number of cases has declined most rapidly in Canada, and in the United States where there is no sickness insurance.

Judging by these facts, the conclusion seems inevitable that the very classes for which insurance is proposed are now receiving under a system of private medical practice, in the United States and Canada, medical care far superior to that which is supplied when the same classes are put under an insurance system. The italics are ours. This extract is taken from "Influence of Sickness Insurance on Diphtheria Morbidity and Mortality," in the *J.A.M.A.*, April 13, 1935. The basis of the tabulations are taken from the Epidemiological Reports of the Health Section of the Secretariate of the League of Nations, March-April, 1934. The original in the *J.A.M.A.* should be carefully studied by proponents and opponents of sickness insurance alike.

Collier's for April, 1935, carries a message to the medical profession in an advertisement! The doctor is becoming accustomed to watching the laymen teach him under what conditions he shall practice medicine. He has not yet accepted teaching of medical facts by lay journals. The statement that the product advertised in-

creased peptic activity up to 30 per cent, and so on, is frankly so crude a piece of misdirected advertising that one wonders whether *Collier's* is fooled, or whether they believe the profession is fooled. The inference, of course, is that the lay reader will swallow the idea, and incidentally the advertised product, and that what is thus said to the profession *must be true*. The profession must be aware of the truth, and hence the dear public takes the statement as true! Just a "bit of sharp advertising practice." "What fools these mortals be!"

Dr. H. Sheridan Baketel, editor of *Medical Economics*, says that his journal has made three income surveys. These reveal that the average net income of physicians in the limited states was \$5,806 in 1928; \$5,059 in 1930, and \$3,969 in 1934. The 1928 figure is based on a questionnaire-letter to which about 1,000 replies were received. The 1930 and 1934 figures were obtained through postcard inserts in his magazine, to each of which more than 4,000 physicians replied. Dr. Baketel's statement is published in the April issue of his magazine.

His figures are greatly at variance with those compiled by the Committee on Costs of Medical Care—they are impressive. This medical editor knew how to get to his readers, and probably was not concerned with proving *how small the doctor's income was*.

Taking up the challenge which the threat of compulsory health insurance held for them, the doctors of the District of Columbia launched a project whereby every resident of the District could avail himself of adequate health services, according to his financial means. The writer of this column was present when the plan was announced.

Its purpose being: (1) to co-ordinate health facilities so that the indigent, near indigent, and the bare-sustenance patients may adequately be cared for; (2) to keep such service entirely within the control of the medical profession; (3) to forestall tax drains encouraged by federal activity in health relief. Dr. Ross Garret is the administrator of the plan. Interested inquirers will receive details as they become available.

The British Actuary Report shows interesting data. We are indebted to *Medical Economics* for publicizing them. Summarized, they show that compared to the United

States, in Great Britain the doctor has lower income than in the United States, there is a higher morbidity there, and also a higher mortality than there is in this country. This is the answer to those who tell us American medicine has failed!

In "Current Comment" of the *JAMA*, April 27, 1935, there is a statement on the Basic Science Boards. This is a board which examines in basic sciences all who would practice the healing art. Recently such a board has been established in Iowa, and there is similar pending legislation in several other States. These boards aim at establishing minimum standards of education for all who propose to heal the sick. The boards render a valuable service in restricting those who would practice medicine. It is a means of obviating a multiplicity of examining boards. The figures presented by the *JAMA* are impressive. Of the physicians examined by such boards last year, 11 per cent failed, of the osteopaths, 36.7 per cent failed, of the chiropractors, 69.2 per cent failed, and of those unclassified, 62.5 per cent failed.

At the third Congress of the Federation de la presse medicale latine, the relations of the medical press and the advertisers of pharmaceuticals were discussed. It was decided that the chief rôle of advertising in the medical journals is to make known in a scientific manner the new things in therapeutics and instrumentation, and to create a feeling of confidence between manufacturers of pharmaceuticals and the medical profession. Editorial independence must be absolute, and frankness must constitute the basis of advertising agreements and contracts. Rules regarding ethics of the advertisers are soon to be available and

will be sponsored by the Federation de la presse medicale latine.

The osteopaths are having a struggle to obtain registration in England. Their bill is pending in the House of Lords. About 800 persons engaged as university professors and lecturers in research and teaching made protest.

More than three hundred physicians from France and Belgium celebrated the Centenary of the Royal Society of Medicine of Ghent. Another centenary was that of the founding of the University of Brussels. Closing the anniversary address, Dr. Paul Hymans, Chairman of the Council on Administration, said: "While it is true that, at the present time, men of science understand one another very well, and the objects of their researches, irrespective of the milieu, the shackles from which during the course of centuries scientific research and particularly medicine have been freed, might bind them again some time in the future. The art and science of medicine are evolving constantly, they will not be tomorrow what they are today. They may and they should become rationalized, they should not be made servile or be functionalized. Science is a vivacious plant and demands a liberal space for its development. It cannot be domesticated. Those who wish to cultivate it can do so only under full and complete liberty."

Two Americans who live and work abroad have been decorated by the French government. Dr. Harry Plotz of the Pasteur Institute, and Dr. Charles Bore of the American Hospital, were made Chevaliers of the Legion of Honor.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS

The Society will hold a Tissue Study Period in New York City, June 3, 4, 5, and 6, 1935, to be followed by the Annual Meeting at Atlantic City on June 7, 8, 9, 1935. The headquarters of the Tissue Study Period will be the New York University College of Medicine, 477 First Avenue, New York City.

The address of welcome will be delivered by Dr. Eugene H. Pool, Dean John Wyckoff presiding. Sessions and tours will be held at the University, the General Memorial Hospital, Bellevue Hospital, Cancer Institute, New York Academy of Medicine. Presiding at these times will be Drs. Douglas Symers, James Ewing, Irving Grief, Ira Kaplan, A. Sala, Frederic E.

Sondern, C. E. LaChappelle, William G. Exton, Lewis Stevenson.

Operative clinics with frozen section demonstrations will be held at the Lenox Hill Hospital by Drs. Hermann Fischer, Carl Eggers, De Witt Stetten, Otto Pickhardt, George L. Rohdenburg, and F. D. Bullock.

As cancer of the stomach alone is responsible for 50,000 out of 150,000 cancer deaths annually in the United States, it is encouraging to read in the *Cancer Digest* that a new x-ray technic, described at the recent meeting of the American College of Surgeons, makes possible the detection of cancer of the stomach in its early and therefore curable stages.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

A Correction

116 E. 53rd Street
New York City

To the Editor:

My friend, Dr. Thomas Bray Spence of Brooklyn, has drawn my attention to an inaccuracy in the text of my article on "Peritonitis" in the April 15 issue of the JOURNAL.

On page 419, the first sentence of paragraph three should read "George Ryerson Fowler in 1900" and Reference 8 should read "Clark, John G." and Reference 9 "Le Conte, Robert G."

The Fowler position in my article was ascribed to Russell Fowler, who is the son of the discoverer. "Dr. George Ryerson Fowler in his *Treatise on Appendicitis*, second edition, 1900, described the position and referred to his communication in the *Medical Record*, New York, Vol. LVII, pp. 617, 1900."

CHAS. GORDON HEYD, M.D.

April 23, 1935

Anent Herr Hartz Again

8326 Lefferts Boulevard
Kew Gardens, Long Island

To the Editor:

For almost thirty years I have worked as a German panel doctor under the conditions of compulsory health insurance, and for many years I was a member of the physicians' committee. It is most interesting to note that the friends of sickness insurance in this country stigmatize such views as these of Mr. Gustav Hartz, recently expressed in the JOURNAL as pro-Nazi propaganda. What Mr. Hartz' motives may be, I do not know, and do not see why anyone should care. The point with me, if you please, is not one of motive but a matter of unsatisfactory personal experience.

During the thirty years of my experience in Germany I witnessed a deterioration of the medical profession. It was gradual. It came about by the removal of the sanctions of preferment by skill and the substitution of preferment by convenience. What I mean is that an insurance scheme soon becomes a business—it must do so to suc-

ceed, while the practice of medicine must be a profession to succeed at its best, and the two will not mix. In Germany the physician who was most adaptable to the advancement of the plans of the insurance officials, and who most pleased the patient for reasons perhaps quite other than skill, obtained the most rapid preferment. It is true there were possibilities left which made it possible to adhere to higher standards—I for instance had such a possibility being a specialist—but many men who might have gone far were ruined by the stultifying panel practice.

In the late nineties at the university we did not much esteem the panel idea. In those early years of state insurance even the lay public knew these doctors to be second-rate. Some years later when I left the University clinic I ceased to laugh at the panel doctor, for I became one myself. My fee averaged 50 cents each for medical cases of three months' duration! Figure out for yourself how many of these I had to have to live decently, and figure, also, how much time I could give to each case. Of course, it goes without saying that a young man of high professional ideals does not think first of the money, but first of his duty to his patient; yet he is forced, under sickness insurance, to make a decision between these two motives which often disastrously affects his attitude toward his work. It is only too easy to weaken, for he must live. The trouble with the scheme is that it encourages careless work by making it more easily profitable; the individual practice encourages good work, by making it, in the long run, more profitable.

I dislike to touch upon the fact that the quality of young men choosing medicine as a career has not improved under sickness insurance, yet I believe it to be true. Bismarck hoped to combat socialism by such insurance, but on the contrary, it worked to encourage socialism. As a result there has been built up a bureaucracy which governs the whole system, and its members have been drawn from the laboring, clerical, and generally less educated classes. More and more as the years go by the young students of medicine come from families of perfectly respectable, but not superior intellectual and emotional background. Response to professional traditions calls for certain native

attitudes which are not always acquired through university training alone, yet are of great social value in those who are to practice the difficult and dangerous art of healing.

The American people will do well to pause long before adopting sickness insurance, remembering that such a system once instituted is sure to perpetuate itself. I have been in this country a year and a half. Some of the hospitals here are the most wonderful I have seen anywhere in the world, and I have travelled extensively in Europe. I wonder whether the average quality of medical care given in the United States is not superior to that which is given in countries where insurance plans are in operation.

May I close by quoting a line from Shakespeare, which seems pertinent: "Seeking to better, oft we mar what's well."

PAUL G. FRANK, M.D.

April 29, 1935

Rebuttal on Hartz

530 W. 143rd Street
New York City

To the Editor:

In the March first issue of the JOURNAL appears an article by one Gustav Hartz and entitled "Will America Copy Germany's Mistakes?" This article takes up the first seventeen pages of the JOURNAL and is endorsed by its editors in a special editorial. The author of this article is represented as one of *Germany's foremost labor economists* and as a man risen from the ranks; a trade unionist speaking for the interests of the laborer and average man. The article is furthermore dramatized by a foreword epitomizing the infancy, youth, and adolescence of Mr. Gustav Hartz. As a climax, this Siegfried among German economists is shown as returning from the field of battle properly acknowledged and decorated.

Synchronously with the appearance of the above article in the STATE JOURNAL (which reached 13,214 of our colleagues) a second edition of this pamphlet was sent out (in March, 1935) to the members of the State Legislature. A subtitle of the pamphlet states: "German Economist Offers New Plan to Avoid Pitfalls of Old One" and in the foreword: "The author's books are based upon a study of facts and procedure which has given him a place as one of the foremost economists of his country."

Now it may be true that Mr. Hartz is an orphan, as stated; it may furthermore be true that he was decorated for valor in the World War. But it is certainly untrue that

he was connected with trade unions. Quite the contrary. This man was associated with reactionary groups (of German clerks) organized for the purpose of *wrecking trade unions*. He had formerly belonged to the Nationalist (Hugenberg's) party and was the latter's contact man to the Nazis; later he joined the Nazis. He is likewise *unknown as an economist* not only in Germany (outside of Nazi circles) but in the scientific world generally. The German Who's Who for 1928 does not even mention his name. He is known, however, as a Nazi propagandist. If one looks at index card No. 639439A of the New York Public Library, on which Mr. Gustav Hartz is listed, he may find the connotation "See German Fascism." He is known as such not only by his affiliations but by his books. The first opus of Mr. Gustav Hartz appeared in 1928 and is called "Irrwege der Deutschen Sozialpolitik (Errors of Germany's Social Politics)." But the great work in which the man reveals himself appeared in 1932 as "Die National-Sozialistische Revolution—Die Loesung der Arbeiterfrage (The Nazi Revolution—A solution of the Labor Problem)." The article in the STATE JOURNAL, "Will America Copy Germany's Mistakes?", is the meat of a pamphlet based on both of the above books and distributed in the United States by the Pennsylvania Self-Insurers Association of Philadelphia.

A perusal of the pamphlet will soon convince the impartial reader that Mr. Hartz is acquainted neither with the facts nor with the procedure (as practiced in Germany before Hitler) or perverts these to suit his own ends. Furthermore, he maligns his own people since according to Mr. Hartz the German laborers, the German physicians, as well as the German legislators and

* Concerning the German doctor, Mr. Hartz says: "Even the doctor is mostly, or at least frequently, unable to diagnose correctly and to distinguish pretenders and hypochondriacs from really sick people, or rather to tell whether a man is fit to work or not" (p. 200). Then again: "That is all very well if the doctors were always able to detect whether the statements of the patients were correct. Often a diagnosis is impossible. He who would like to prove this should go to ten doctors, complain of headache, pain in the limbs, rheumatism. All ten will start a treatment for headache or rheumatism, without discovering that nothing whatever is the matter with the patient. Besides that, all doctors are glad to get new patients, for do they not mean their livelihood? Medical science has become a cheap article, and doctors have given up conscientious treatment" (p. 201).

The German worker Hartz represents thus: "Here is one instance from among thousands:

State employees are either crooks or incompetents, or both.* Those who know the German people well also know that they are at least as honest as any other. That in these sad times a nation made desperate by war, hunger, and crushing tax burdens has fallen into the grip of a band of extraordinary rascals does not mean that the innately upright German spirit has died—and died to the extent of making half of its population thieves and scoundrels, as Mr. Hartz would wish us to believe.

To show the *modus operandi* of Mr. Hartz's mind and logic, the reader may turn to page 202 of the article. The caption of one paragraph on that page reads: "Pronounced Well, He Dies Two Days Later." Such tricks are characteristic of Mr. Hartz's technic. To prove a point he chooses a rare and singular case and makes it appear to be of every-day occurrence. Need any more he said about the "truth" of the rest of his statements?

A prefatory note on the back of the title page of the second edition of this pamphlet (page 2) makes the following amazing statement: "On January 15—about one month after this pamphlet was written by Mr. Hartz—the German Government officially abolished unemployment insurance." This assertion, of course, is totally unfounded and of a complexion of the other "Truths" proclaimed therein. On pages 208 and 209, Mr. Hartz insinuates that the German Government would like to abolish social insurance; he pretends that it is impossible for the government to do so only because the nation is accustomed to such institutions and as "the winding up of the present system would require a very long time." This, of course, is another misstatement. Anyone who is acquainted with or has heard anything of Nazi methods knows that the present German régime would not shrink from abolishing anything, and could abolish social insurance with a stroke of the pen.

The foreword (page 194) claims: "Until trade unions were abolished, he [Mr. Hartz]

continued to be one of their outstanding spokesmen." This is a whale of a lie. Trade unions were abolished by the Nazis in 1933. Mr. Hartz's books (see above), published in 1928 and 1932 and based entirely upon Nazi *anti-democratic ideology* would preclude the author from membership in any trade union; and even the contention that the author was a member of the Reichstag (which he could not have been but as a delegate of the Nazis) is so put as to mislead one into the impression that during that time he was a trade unionist.

A special chapter could be written, for instance, on how Mr. Hartz arrives at the 17 per cent which he claims the German worker has to pay for social insurance. To simplify matters, Mr. Hartz allots one-fifth of the worker's earnings for the purpose (page 205) and gets his results as follows: He adds the employer's share to that of the employee and then observes *naïvely*: "Is it to be expected that an employer can afford to present his employee with a 10 per cent bonus in addition to his wages?" (page 205). Expressed in other terms, Mr. Hartz implies that the employer practically deducts the social insurance contribution from the wages and that without social insurance the worker would receive an increased wage. Significant also is the way in which these 17 (or 20) per cent are presented to the American reader. To begin with, the fact that this percentage (in Germany) represents the contributions of both employer and employee is not clearly expressed, and is apparent only after careful scrutiny. Furthermore, a pay envelope showing a gross wage of 38.88 R.M. and (after several deductions) a net wage of 29.45 is reproduced (page 206) without English translation. A reader with insufficient knowledge of German is led to believe that almost all the deductions are for the purpose of social insurance. The truth is that only 3.61 R.M. (and not 9.43 R.M.) goes for social insurance, to wit:

Krankenkasse (Health Insurance) ..	1.30 R.M.
Erwerbslosenfuersorge (Unempl. Ins.)	1.26
Invalidenversicherung (Inval. and Old Age Ins.)	1.05
	3.61 R.M.

The other items are special contributions exacted from the worker, but even then the entire range of social insurance cost the German worker only slightly more than 9 per cent of his wages.

Throughout the pamphlet all the stock phrases used by the Nazis are repeated; all the accusations, perversions of fact and lies

2,008 patients were ordered to appear for a final examination. Eight hundred sixteen of them at once declared their complete recovery; 289 were found to be well by the confidential doctor. So nearly 50 per cent were not ill at all" (p. 202).

Of the German administrative officials Hartz observes: "Downright corruption adheres to the palaces. One scandal follows the other. Administrative officials, suppliers, architects were dragged into the mire. Common embezzlement, bribery and other dishonorable acts on the part of officials were uncovered. . . ." (p. 204).

which the Nazis employed against the German Republican Government and against social insurance administrations in their ride to power are not only found in this pamphlet, but are there as a rule in *fat print*. Almost every sentence of this pamphlet is equivocal and neither basis nor proofs are offered for Hartz's assertions.

And what do you suppose does Mr. Hartz offer as a panacea against economic insecurity of the average man to supersede all social insurance? A compulsory savings system! Each worker to have a bank account! "Then," says Hartz (page 207), "in case of illness, unemployment, etc., he [the worker] would be able to fall back upon his own resources first of all." Very good. But what shall become of these people when their savings are exhausted? Quite simple, says Mr. Hartz (page 208). "They must of course be taken care of by society." And adds with characteristic Nazi callousness, "Existing institutions for the aid of the poor, trade unions [that these latter were abolished by the Fascist State does not bother him in the slightest], Salvation Army, Red Cross, etc., would be quite sufficient."

Mr. Hartz appears to have not the slightest idea of the number of unemployed even in good years. If, for instance, there are, say, 10 per cent unemployed within a given year, it does not mean that out of every 100 workers only 10 were unemployed throughout the year and that 90 were employed the entire year. In practice it means that approximately 30 were unemployed during the year on an average of 17 weeks each. Very conveniently Mr. Hartz also overlooks the fact that every worker requires annually a substantial sum for medical care for himself and his family. If he had taken into consideration but these two facts (and —one is tempted to add—had not been a Nazi) he could not have come to the conclusion that "there would be but a few who under a savings account system might fail to support themselves" (p. 208). The worker could not take care of himself even if he were able to save the fantastic amount of 17 per cent of his wages, as Hartz says he could do (p. 205). In practice, perhaps a few workers who were sufficiently fortunate to put in thirty to forty years of steady employment, and who and whose families during that period did not suffer any illness, might theoretically accumulate a sufficient reserve. The overwhelming majority, it goes without saying, would rapidly consume all their savings during illness, unemployment, etc.

Of the remainder of the pamphlet two

assertions in particular deserve mention: (1) that social insurance creates poverty instead of curing it (p. 196) and (2) that the economic crisis in Germany was aggravated considerably by social insurance (p. 198). Says Mr. Hartz: "A worker protected by a comprehensive system of social insurance *has no incentive* to save and will of necessity remain poor" and that "honest workmen were made to believe it their solemn duty to remain penniless" (p. 198). Despite which he says (p. 208): "Social insurance has taught one good lesson: every one must use part of his earnings to protect his future." And he quotes the United States as an example. As a matter of fact, we have in the United States only one example at this writing, and that is that this gentleman, disregarding his Nazi bias, does not really know what he is talking about. His contention of the aggravation of the crisis in Germany because of social insurance is likewise unfounded and based solely on Nazi ideology. He offers no proofs. We have, on the other hand, the assurance of eminent English economists that the crisis was mitigated in that country by the existing unemployment insurance system, which safeguarded the purchasing power of the unemployed.

Despite the editor's note (p. 193), Dr. Bedell's approval (p. 193) and Mr. Hitler's sympathy (p. 194); despite even Mr. Walter Linn's demagogic misapplication of the motto, "Ye shall know the truth and the truth shall make ye free," I cannot believe that the editors of the NEW YORK STATE JOURNAL have willfully and knowingly given themselves as agents for the spread of Nazi propaganda. For such the article is, pure and simple. Let those who still doubt, read and ponder the concluding paragraph (p. 209) of Hartz's article: "One thing, however, is certain: There is only one state in the world that *fight*s proletarianism among the working classes energetically and purposefully with all *ideal* means, and in principle shares the opinions expressed here—that is Germany" [the italics are mine]. Although it takes the truth an H of a time to catch up with a lie, yet by publishing this communication as well as by opening your STATE JOURNAL to an exhaustive rebuttal of Mr. Hartz's article by competent authorities, you will in a measure help to do just that. And what is more, in my estimation that is the only way in which you will truly aid America in her efforts NOT TO COPY GERMANY'S MISTAKES.

M. J. TOBIAS, M.D.

April 12, 1935

Medicine and Socialization

441 E. 15th Street
New York City

To the Editor:

When one contemplates the present state of medical practice with its numerous tendencies and variety of conflicting plans and panaceas, one is amazed at the profound lack of understanding of our decadent social organism, manifested by the proponents of these plans. If we could only rise above the tumult of the passions, prejudices and irrationalism into a state of reason, we would, perhaps, not find ourselves in such a dilemma concerning the future.

Let's ask ourselves the question, what is wrong with our present system of medical practice? What are its inherent evils? On the one hand, the medical practitioners, by and large, are dissatisfied because of the constantly diminishing monetary returns which they get from the practice of medicine; because of the dishonest and often racketeering tactics which they have to employ to make life possible; because they are unable to render the best possible medical and surgical services while constantly facing economic insecurity and, last but not least, because of the annihilating competition of the hospitals and clinics against the individual practitioners. On the other hand, the public is dissatisfied with the present practice of medicine because the vast majority cannot afford proper private medical care, and are therefore compelled to go to clinics where they are often maltreated and abused. Now all these evils, whether from the viewpoint of the doctor or from that of the patient, have one common cause, our present chaotic and anarchic economic system of society. There cannot be a satisfactory change in the practice of medicine, no more than there can be a satisfactory change in all other human endeavors, unless there is a rational, humane and well planned social and economic system of society. The problems that confront the medical profession are not very much different from the problems confronting mankind at large. And just as there are a variety of plans and solutions to our problems, there is still a greater variety of more conflicting plans and solutions to the problems of a perplexed and suffering humanity. We have but to peruse the daily press to be convinced of the dilemma that our political and social doctors find themselves in, each one prescribing different stimulants for our decompensating economic system. Rugged individualism, NRA, Share Our Wealth, Father Coughlinism, Townsendism, Fascism and many others are the panaceas offered.

When we analyze critically all the above

enumerated social and economic plans for a more humane social order, we are forced to reach but one conclusion, namely, that they are all (what the psychologist would call) "escapes from reality." They are not solutions but evasions. All these plans are futile attempts to prolong and perpetuate a diseased social order. Our political and social leaders are either incapable of understanding the capitalist system of production and distribution with its inherent contradictions and inevitable crises or, if they do understand, they are not big and courageous enough to recognize the fact that our capitalist system of society, like Roman society of 2,000 years ago, is reaching the limits of its historic function. The existence of a highly centralized social mechanism with a corresponding absence of intelligent guidance, a top-heavy capitalism, without the capacity for rational control, that is the contradiction we find ourselves in. The consciousness of our inability to direct our economic life finds expression in the eclipse of reason and an irritated reaction to any rational ordering of our ethical life. There are at present no indications to show that our materialistic civilization, of which irrationalism is its reflex, can escape the full turbulent course and its inevitable destiny.

A system of society, not unlike the life of a human being, undergoes certain definite periods of development. There is the intrauterine existence, birth, growth and development, maturity followed by a period of decline or old age, and finally death. Medieval society contained within itself the embryo of capitalism. With the discovery of the spinning machine, the power loom, the steam hammer, capitalist society was born. During the past three decades, capitalism has developed to gigantic proportions, and industry became ever more and more centralized into the hands of a comparatively few individuals at the expense of the vast mass of suffering humanity. It has now reached a point in its evolutionary process where the individual capitalists are incapable of managing things any longer. Our present crisis demonstrates the incapacity of the capitalist class of managing any longer modern productive forces, and it therefore remains for society to take over all the productive forces. The socialization of all the means of production and distribution, and the management of society for the benefit of all human beings and not for the chosen few, that is the next step in the historic process of human society. With the "socialization" of the productive forces there will inevitably follow the "Socialization of Medicine." Not until mankind establishes a human and

rational system of society, a system of society where there are no masters and slaves, rich and poor, but free human beings, not until then will the inhabitants of this earth be worthy of calling themselves human beings.

MAURICE KORNBURG, M.D.

March 20, 1935

Another Hartz Commentary

520 W. 110th Street
New York City

To the Editor:

Mr. Gustav Hartz's article, "Will America Copy Germany's Mistakes?" in the issue of March 1, of your JOURNAL contains so many misstatements, gross errors and wrong conclusions, that it is really surprising how low the editors, by giving this article prominent space and editorial praise, rate the intellectual level of their readers.

The article endeavors to prove that social insurance impoverished the German masses. The author also claims that payment of sick benefit as well as unemployment relief was inducement enough for millions of working men and women to stop work, preferring the collection of benefits to wages and that, therefore, social insurance was a contributing factor to unemployment.

Mr. Hartz evidently confounds cause and effect. Because of the steadily rising unemployment as the result of the economic crisis, millions of workers in Germany (as in other countries) had to resort to unemployment relief as the other alternative to starvation. The increase of sick insurance money paid during the time of unemployment runs almost parallel with the decline of the health of a nation as the result of the depression.

We have plenty of evidence to this effect in the United States. Why should a workman be satisfied with less than half, at times one quarter, of his regular pay, unless unemployment or illness compels him to do so? A few isolated cases of malingerers or fraudulent claims by workmen supposedly on the sick list, but actually "illicitly" working, may have occurred, but do not justify Mr. Hartz's sweeping conclusion that millions of people refused to work because of these benefits. One may just as well claim that the unemployment relief paid in the U.S.A. results into unemployment, whereas anybody knows that it is an attempt (and because of its insufficiency not always successful) of the government to prevent starvation and social unrest among the masses *because* of unemployment.

Mr. Hartz "proves" his point by stating: "Since last year police raids are occasionally made in the big cities in search of illicit workmen in market halls, ports, at railway stations, etc. Thousands were caught, part of them were imprisoned."

Which part of them was imprisoned, Mr. Hartz? Why were they imprisoned? Why not be more specific? We know very well how to judge the results of Nazi raids!

Mr. Hartz is wrong in pointing out that the employer's burden in paying of premiums of social insurance in Germany was a handicap for the development of industry. According to official statistics the cost of production in Germany's coal mining industry amounted to about 60 per cent as compared with the same industry in Great Britain. This is most significant because it was just the German mining industry that had to carry the highest premiums as compared with any other industry. The same situation—lower cost of production in Germany in spite of the supposed high premiums for social insurance—was apparent in the chemical industry.

The real purpose of the fight of the German industrialists against social insurance lies precisely in their determination to lower the wages of the workers. This is the crux of the matter. By eliminating unemployment and sickness insurance, by destroying independent trade unions and other independent workers' organizations, German capital is dealing with an unorganized, helpless, socially insecure mass of workers, who, by reason of their insecurity, were forced to accept any wage scale offered to them by industry. It is clear that the Nazi policy of reduction of benefits, derived from social insurance as well as the abrogation of all collective contracts reflected in the "famous" Nazi Labor code, necessarily resulted into a lower standard of living. The German Institute for Economic Research reported a decline of 10 per cent in the consumption of principal foodstuffs during the first two quarters of 1933, for some articles even 30 per cent and a subsequent "stabilization" at this lower level. Prices of foodstuffs are steadily rising in Germany. The price of margarine—one of the main sources of fat for the German working class—rose by about 200 per cent since the advent of Hitler, the price of wheat to 182 marks per ton or about four times the world price.

In the face of these conditions, the Nazi propagandist, Gustav Hartz, has the brazenness to announce in the JOURNAL: "One thing however is certain: there is only one State in the world that fights proletarianism among the working classes energetically and purposefully with all ideal means, and in

principle shares the opinions expressed here—that is Germany. In what way the ideal and material raising of the proletariat will develop depends on the economic development of the next few decades.”

The Kranken Kasse system in Germany had many serious defects. It never intended to be, nor could it possibly be compared to, Socialized Medicine. It was a large scale contract practice, subsidized and controlled by the state. It was insufficient and incomplete. However, only blind hatred against any social progress can conclude from the German experience that *any* social insurance, *any* protection of the working people, should be eliminated.

One word about the NEW YORK STATE JOURNAL OF MEDICINE: Many physicians in this country are extremely interested in

the development of German affairs, especially in its medical, social and cultural aspects. They would greatly appreciate some articles illuminating the stupid racial theories and racial policies of the Nazis, the eviction from Germany of the best physicians and teachers, the encouragement of herb doctors and other quacks, the return to medievalism and barbarism. The editors of the JOURNAL do not find it essential to acquaint the readers with these changes, but in their violent opposition to Socialized Medicine, have allied themselves with a Nazi propagandist to give valuable space (17 pages) of the JOURNAL for open fascist propaganda. Will America copy Germany's mistakes?

JACOB AUSLANDER, M.D.

March 18, 1935

CHANGES IN PAN AMERICAN MEDICAL ASSOCIATION "FLOATING CONGRESS"

Changes in ship, sailing date, itinerary and duration of cruise, have been announced by the Pan American Medical Association in connection with their "Floating Congress." The palatial *Queen of Bermuda* has been chartered, a fine modern liner having magnificent public rooms, broad decks, sports facilities, larger rooms for meetings, and the advantage of a private bath with every room.

The sailing date will be June 29, for a cruise of 35 days, with the return scheduled for August 2. Havana and Santo Domingo have been replaced in the itinerary with stops at Nassau and Puerto Rico.

Twenty-four papers are to be presented before each of 17 sections, representing all branches of medicine, with special scientific sessions arranged by the Brazilian medical profession.

THE FIRST INTERNATIONAL CONGRESS OF PHYSICIANS IN FAVOR OF THE PROMOTION OF THE USE OF WINE

LAUSANNE—AUGUST 28-31, 1935

The Committee on Organization of the First International Congress of Physicians in Favor of the Promotion of the Use of Wine has just been organized under the Chairmanship of Professor Portmann, President of the Congress.

All physicians desiring to participate in the Congress should forward at once, with their applications, the titles of their papers or comments together with a résumé of about 20 lines, preferably in French, to M. LEON DOUARCHE, Directeur de l'Office Internationale du Vin, 1 Place du Palais Bourbon, Paris, VII, France.

The following three questions will be discussed at the Congress: (1) Vitamins in Wine, by Prof. Baglioni (Rome); (2) Wine in Diseases of Nutrition, by Dr. Weissenbach (Paris); (3) Wine in Psychiatry, by Dr. Anglade (Bordeaux).

The Congress will hold its meetings at the Faculty of Medicine of Lausanne on August 26, 27, 28, 1935. It will be followed by three days of excursions to the vineyards, around Lake Geneva and in the Valais. The membership fee is 100 French francs;

it includes the right to participate in the activities of the Congress, including the closing banquet, the transportation for the three days of excursions, as well as the publications of the Congress. Each member is entitled to extend the faculties of the Congress to his wife and to another member of his family by subscribing to a membership fee of 80 French francs for each (publications not included).

Special rates will be given to members of the Congress by the hotels in Lausanne; a reduction in railroad and steamship fares is also anticipated. For further information apply to M. DOUARCHE, Secrétaire General Administratif du Congrès, 1 Place du Palais Bourbon, Paris, VII, France. The Committee invites all medical groups interested in the promotion of the use of wine in the different countries, especially in the wine-growing countries, to participate in the activities of the Congress, assuring them of a cordial welcome with the simplicity traditional to Swiss hospitality.

DR. GAY

Secretary of the Congress
8 Grand Chêne, Lausanne

Society Activities

The State Society Dues

A formal query from the Medical Society of the County of Erie as to the allocation of the \$10 annual State assessment came to the Treasurer. For the information of all the County societies we reprint the Treasurer's answer.

April 19, 1935

MY DEAR DOCTOR O'GORMAN:

I am pleased to give you the information you request in your favor of April 15th, on behalf of the Erie County Medical Society. You will pardon me if I amplify it somewhat in order to be sure the understanding of your members is complete.

In the first place, the dues of the State Society are not a "Ten Dollar per capita tax" but dues for individual membership the same as in your County Society. The collection of these dues from the members is entrusted to the component County Society.

In computing the appended allocation of the Ten Dollars, which is purely arbitrary, I have divided the budget into groups of items representing various phases of the Society's work and have then divided the amount received from dues of members among these items. Please recall that these figures represent the amount assigned by the Trustees to these various items for the administrative year, the period covered from July 1, 1934, to July 1, 1935. (The Fiscal year as shown in the Treasurer's Report dates from January 1, 1934, to January 1, 1935.) This budget was determined upon after a Budget Committee, selected from the Executive Committee, had an all afternoon meeting and made its recommendations. These were thoroughly discussed and modified by the Executive Committee and forwarded to the Trustees who further amended and modified them. You will therefore see that the budget receives very careful attention. The year is not complete until July 1, 1935, and there yet remains in the treasury enough money to assure us of a well balanced budget. Indeed, as you will notice by the last item there will be a slight surplus if the budgetary items are all exhausted, which will not be the case.

I have before me a carefully prepared account of moneys spent to April 1, 1935, compared with the amount appropriated in the budget. This shows that there will be some small savings aside from the item marked "surplus," notably in the Directory account. The savings in the JOURNAL last year have been important. The new method of management by the JOURNAL Management Committee made the total costs for the 1934 twelve months \$9,223.53 which was seventy cents per member. The previous year the total cost was \$18,915.91 or one dollar seventy-five cents per member. In the years preceding the costs were even higher.

Whatever surplus is accumulated during the year is carefully invested to provide for future needs. The Society is to be congratulated upon the investment policy which its Trustees have fostered.

ARBITRARY ALLOCATION OF TEN DOLLARS DUES PAID TO THE STATE MEDICAL SOCIETY IN ACCORDANCE WITH ADMINISTRATIVE BUDGET YEAR 1934-35

(Based on 1934 Membership)

Standing Committees:- Legislative, Public Health and Medical Education, Econom- ics, Scientific, and Public Relations	1.47
Salaries	1.41
Directory Expense	1.15
Attorney: Defense	.95
Special Committees	.93
Journal Expense	.92
Rent, Telephone, Postage, Printing, New York Office	.73
Executive Officer Albany Office	.67
Special Appropriations	.44
Secretary: Expenses, Honorarium	.27
Officers Travel Exp.	.23
A.M.A. Delegation	.11
Surplus	.60
	\$10.00

In the graph each * stands for ten cents.

APPORTIONMENT OF EACH DOLLAR SPENT BY THE FIVE STANDING COMMITTEES, 1934

Public Health and Medical Educa- tion	\$.40
Legislation	.37
Economics	.14
Public Relations	.06
Scientific	.03
	\$1.00

In closing these informative sentences may I call your attention to the fact that it would take but very slight defection in our membership to abolish the surplus for budgeted expenses, for the Sixty Cents would soon be wiped out. The next five years will in all probability prove the most fateful in the history of our profession. Many of us have in mind large services which

we hope the State Society can perform for its members and the component County Societies. We need to double our dues rather than to reduce them, just the same as every County Society needs the same measure. However, all recognize this cannot be at this time. If the component County Societies are embarrassed financially, and I know of a number which are, is it not the time to make sure that our State

organization is in a position to assist in case of need?

I trust that with an understanding of these things Erie County Society will send a full delegation pledged to maintain the financial stability of the State Society by maintaining the present scale of dues.

Yours fraternally,
CHARLES H. GOODRICH, *Treasurer*

AMERICAN MEDICAL GOLFERS TO MEET JUNE 10, ATLANTIC CITY

The twenty-first annual tournament of the American Medical Golfing Association will be held at the Northfield Country Club, Atlantic City, Monday, June 10. Thirty-six hole competition will be played for the seventy prizes offered in nine events. This includes the championship event, which has as its major prize the famous Will Walter Trophy, awarded since 1923 for low gross thirty-six holes. This trophy, designed by Edgar Millar and executed by the Cellini Shop, Evanston, Ill., symbolizes the evolution of medicine.

The first handle depicts the age of primitive ignorance, with shaman witch doctor, spells and the invocation of nature gods to cure ailing mankind, from antiquity to 500 B.C. The second handle shows the age of Greek thinkers, bearing the serpents symbolic of Aesculapius, god of medicine—an age of thought and research, from 500 B.C. to 640 A.D. The third handle represents the age of medieval superstition from 640 A.D. to 1500 A.D., with an astrologer, the physician common to the dark ages. The fire of incantation rises behind the figure as he traces a cabalistic sign in the air. The fourth handle depicts the age of modern medical research, from the Renaissance to modern time, with increasing light spreading from a figure symbolic of an enlarging vision.

Winners since the cup was placed in competition have been Drs. E. A. Seaforth, San Francisco, 1923; George McKee, Pittsburgh, 1924; Homer Nicoll, Chicago, 1925; S. M. Hill, Dallas, Tex., 1926; George McKee in 1927; Walter Sheldon, Rochester, Minn., 1928; John Loudon, Yakima, Wash., 1929 and 1930; George McKee, 1931; S. M. Hill, 1932; Mark Bach, Milwaukee, 1933; and John Loudon, Yakima, Wash., 1934 (third time).

Other Events—Seventy Prizes

Other events and trophies include the Association Handicap Championship, 36 holes net, with The Detroit Trophy; the Championship Flight, first gross 36 holes, with the St. Louis Trophy; the Championship Flight, first net, 36 holes, the Presi-

dent's Trophy; the 18 Hole Gross Championship, with the Golden State Trophy; the 18 Hole Handicap Championship, with the Ben Thomas Trophy; the Maturity Event, with the Minneapolis Trophy; the "Old-guard" Championship, with the Wendell Phillips Trophy; the Kickers Handicap, with the Wisconsin Trophy.

Dr. Charles Lukens of Toledo is president; Drs. C. H. Henninger of Pittsburgh, and John B. Morgan of Cleveland, are vice-presidents of the American Medical Golfing Association, which has a total membership of approximately 1100, representing every State in the Union. All male Fellows of the American Medical Association are eligible to membership. A cordial invitation is extended to every medical golfer to write the executive secretary, Bill Burns, 4421 Woodward Avenue, Detroit, for an application blank. An enjoyable day on June 10 will be the result.

Canadian Physicians Invited

A special invitation has been extended by the American Medical Golfing Association to the Canadian Medical Association, which meets in joint session with the American Medical Association at Atlantic City, this year, so that golfing physicians from the Dominion may join with the medical golfers of the United States for a day of enjoyment in Atlantic City.

MEDICAL RADIO BROADCASTS

Under the auspices of the Medical Information Bureau of the New York Academy of Medicine, the following radio talks have been arranged, to be broadcast from Station WABC and the network of the Columbia Broadcasting System:

Thursday, May 16, 1:15 P.M.—Speaker: Dr. John C. A. Gerster, Chairman, New York City Cancer Committee. Subject: "The Care of the Cancer Patient."

Thursday, May 23, 1:15 P.M.—Speaker: Dr. S. Bernard Wortis, Assistant Professor of Neurology, New York University and Bellevue Hospital. Subject: "The Treatment of Epilepsy."

County Societies

Albany County

A movement to make diphtheria immunization compulsory for all school children has been endorsed by the Albany County Medical Society

Bronx County

A series of radio talks on tuberculosis have been given under the joint auspices of the Bronx Tuberculosis Health Committee and the Bronx County Medical Society

It happens so often that the free visits of physicians turn out to be unnecessary, that it has been decided in Bronx County to have a nurse respond to calls placed at the local headquarters and then notify the Society's offices in case a physician's service is found to be needed

Dutchess-Putnam Counties

Poughkeepsie's plan of paying an outdoor relief physician \$1,200 a year, aided by two physicians on a part-time basis, who up until recently were to have received only about \$300 for their services, and expecting them to take care of the indigent sick in a city of 40,000 population, is "ridiculous" in the opinion of Dr. John R. Ross, president of the Dutchess-Putnam Medical Society.

Assailing the Poughkeepsie Board of Public Welfare plan, Dr. Ross said he personally believed it was "ridiculous" to expect that one physician, with little help, could be expected to handle the need of the TERA clients there, and that it is not generally realized that the physicians at large are doing a large share of the work without a cent of compensation.

Dr. Ross has appointed a committee, headed by Dr. Samuel Appel, to represent the society in studies made of the TERA medical relief.

Erie County

A day packed with felicitations, meetings, and receptions of all kinds, marked the twenty-fifth anniversary of Dr. Francis E. Fronczak as Health Commissioner of Buffalo on March 26. As appropriate to mark the flight of time, the workers in his department gave him a watch. The Visiting Nurses Association gave him a vase of orchids and roses. Polish American leaders of the city voiced their pride in his fine record and gave him a brief-case. During the war Dr. Fronczak won distinction. Says the *Buffalo Times*

"He became the chief arbiter between Poland and the American government and cemented firmly the bonds of friendship between the Republic. He was chief liaison officer also between the French and American armies."

"Long before war ended Dr. Fronczak was in charge of all sanitation engineering for the armies of central and western Europe."

"He returned to Buffalo wearing decorations from the appreciative governments of a dozen nations. The American government recognized his services, too, and in addition to bringing medals on his chest raised his rank until today he holds a commission as colonel in the medical corps, regarded one of the 'closed branches' of the Army."

"He is a student of the arts and has made frequent visits to Europe spending much time in Poland. He is a friend of most of the 'great' of that country, among them being Ignace Paderewski, Marshal Pilsudski, and Gen. Josef Haller."

The home is as effective as the hospital in caring for many cases of contagious disease. Dr. Walter S. Goodale, superintendent of the Buffalo City Hospital, told a conference of Western New York physicians in the hospital on March 27.

Livingston County

Dr. J. C. Preston, who died on March 14, had practiced medicine in Avon 42 years and had been health officer of the town 31 years.

Monroe County

Hospital insurance will soon be available to employed persons of Rochester and vicinity, according to announcement by the Rochester Hospital Service Corporation.

Rochester hospitals participating are the Strong Memorial, Genesee, General, St. Mary's, Highland, and Park Avenue.

The plan for this type of insurance has received the approval of the American Medical Association in a resolution adopted at its Chicago session a month or two ago. Legislation permitting establishment of the insurance was enacted by the New York State Legislature last year, the bill being introduced by Senator Norman A. O'Brien of Monroe, 46th District. Assemblyman Paul Taylor, also of Monroe, and secretary of the Hospital Service Corporation, was instrumental in drafting the bill.

The plan as being completed is not to be confused with so-called "socialized medicine," it is explained. The local corporation is an improvement on various other plans that grew from the original setup which was found satisfactory in Dallas, Tex., some years ago, it is stated.

Nassau County

A resolution favoring a County health unit was put on record at the meeting in March of the Nassau County Medical Society. At the same meeting Dr. F. E. Elliot, chairman of the State medical economics committee, declared that the differences between the medical profession and the welfare foundations was rapidly being ironed out. "We may soon look for a restoration of amicable relations," he declared.

The public health committee of the medical society read into the record a resolution endorsing the Sauer vaccine system for preventing whooping cough.

"The vaccine, found by Dr. L. W. Sauer of Indiana, shows evidences that it will protect children from this dread sickness," Dr. L. H. Bauer, executive secretary of the medical unit declared. "Past experiments have proved unusually successful."

Oneida County

Maternal mortality has been sharply cut in Utica, according to Dr. Robert Sloan, appointed by the Oneida County Medical Society to take charge of the survey.

A decline in the maternal death rate in 1934 was reported by the doctor who said the death rate for 1933 in Utica was 51.7 per 10,000 cases compared with 46.5 per 10,000 cases in 1934.

Onondaga County

An interesting joint meeting and dinner of the Medical Society and the Bar Association of Onondaga County was held on April 13 to discuss the scientific detection of crime.

New York County

Dr. J. J. Valentine, who died on March 11, was a former president of the Pan-American Medical Association and the New York section of the American Urological Association.

He was professor of urology at the New York Polyclinic Medical School and director of urology at Morrisania Hospital in the Bronx. Both the Cuban and Venezuelan Governments decorated him for his efforts in advancing Pan-American good will and scientific relations.

In the World War he served in France 22 months in the Medical Corps at Base Hospital 66 in Brest. He was elevated to the post of headquarters medical and surgical consultant with the rank of major.

He was a member of many leading medical associations and served on several important committees in these groups and in hospitals.

Rensselaer County

Dr. Osman F. Kinloch, of Troy, who died in March, built more than 100 houses in the city; so many, in fact, that that part of Troy is known as the Kinloch Section. In that locality, too, the good doctor and his wife gave the land for a playground which has been named Kinloch Park. He was 82, and had practiced medicine in Troy more than 50 years.

Richmond County

Dr. Walker Washington, the oldest practicing physician in Richmond County and a descendant of the branch of the family which produced the first President of the United States, was the guest of honor at a dinner given on April 8 by his colleagues at the Meurot Club in St. George, S. I. More than 100 physicians were present.

The physician, who is 78 years old and who settled in Tottenville in 1885, has helped to bring 2,500 Staten Islanders into the world and has not lost a single confinement case in the last 25 years. The dinner was arranged by the Richmond County Medical Society.

Dr. Washington was born in Fredericksburg, Va. He is an attending physician at the Richmond Memorial Hospital at Princes Bay, S. I., a member of the Medical Society of the State of New York, the American Medical Society and is a charter member of the Richmond County Medical Society. He is president of the Tottenville National Bank.

Sullivan County

Dr. Luther C. Payne, of Liberty, who died on March 16 after a brief illness, had served as secretary of the Medical Society of Sullivan County for over twenty-five years and at the time of his death was president-elect of the Third District Branch of the State Medical Society.

Westchester County

The board of regents of the American College of Physicians has presented a life membership certificate to Dr. Ralph C. Clock, a member of the consulting staff of the Nyack Hospital, in appreciation of his loyal and active interest in the college.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Dentist—Unethical Advertising

An important case* dealing with the statutory control of advertising by professional men recently came before the Supreme Court of the United States.

The plaintiff was a dentist who had been engaged in practice in the State of Oregon under a license for about fifteen years. During that time he had continuously advertised his practice in newspapers and periodicals, and had employed advertising solicitors. His advertisements had represented the dentist to guarantee his work, and offered free examinations to prospective patients. He also had indulged in advertising representing that his work was of a superior nature, and performed painlessly. He had also published schedules of his fees. The dentist had also made use of large display signs to call attention to his offices.

For some time the laws of the State had provided for the revocation of the licenses of dentists for unprofessional conduct which had included advertising of an untruthful or misleading nature. An amendment to the law was enacted to strengthen the statute including as additional grounds for revocation the following:

... advertising professional superiority of the performance of professional services in a superior manner; advertising prices for professional service; advertising by means of large display, glaring light signs, or containing as a part thereof the representation of a tooth, teeth, bridge work or any portion of the human head; employing or making use of advertising solicitors of free publicity press agents; or advertising any free dental work, or free examination; or advertising to guarantee any dental service; or to perform any dental operation painlessly.

The plaintiff dentist brought an action against the State Board of Dental Examiners to enjoin the enforcement of the said law on the theory that it was repugnant to the due process and equal protection of law clauses of the Fourteenth Amendment to the Constitution of the United States. He also made the claim that the statute was invalid as impairing the obligation of contracts.

The plaintiff's complaint was dismissed in the Oregon Courts and an appeal was taken to the Federal Courts and eventually

the case came before the highest Court in the nation for determination. The plaintiff contended before the Supreme Court that he had developed a large and profitable practice and through training and experience he developed an ability as a dentist superior to that of the majority of dentists. It was his assertion that the extravagant claims made in his advertising could be substantiated, and that therefore he was entitled to continue his practices, and that an interference by statute with his methods was a violation of his constitutional rights.

In deciding against the contentions of the dentist the Court handed down a well reasoned opinion written by Chief Justice Hughes in part as follows:

Plaintiff is not entitled to complain of interference with the contracts he describes, if the regulation of his conduct as a dentist is not an unreasonable exercise of the protective power of the state. His contracts were necessarily subject to that authority. . . . Nor has plaintiff any ground for objection because the particular regulation is limited to dentists and is not extended to other professional classes. The state was not bound to deal alike with all these classes, or to strike at all evils at the same time or in the same way. It could deal with the different professions according to the needs of the public in relation to each. We find no basis for the charge of an unconstitutional discrimination. . . .

The question is whether the challenged restrictions amount to an arbitrary interference with liberty and property and thus violate the requirement of due process of law. That the state may regulate the practice of dentistry, prescribing the qualifications that are reasonably necessary, and to that end may require licenses and establish supervision by an administrative board, is not open to dispute. . . . The state may thus afford protection against ignorance, incapacity and imposition. . . . We have held that the state may deny to corporations the right to practice, insisting upon the personal obligations of individuals . . . , and that it may prohibit advertising that tends to mislead the public in this respect. . . .

In answer to the plaintiff's claim that the statute went too far when it prohibited the type of advertising which he had engaged in, even though the advertising may have been truthful, the Court said:

... The state court defined the policy of the statute. The court said that while, in itself, there was nothing harmful in merely

* *Semler v. Oregon State Board*—vs—, Decided April 1, 1935.

advertising prices for dental work or in displaying glaring signs illustrating teeth and bridge work, it could not be doubted that practitioners who were not willing to abide by the ethics of their profession often resorted to such advertising methods "to lure the credulous and ignorant members of the public to their offices for the purpose of fleecing them." The Legislature was aiming at "bait advertising." "Inducing patronage," said the court, "by representations of 'painless dentistry,' 'professional superiority,' 'free examinations,' and 'guaranteed' dental work" was, as a general rule, "the practice of the charlatan and the quack to entice the public."

We do not doubt the authority of the state to estimate the baleful effects of such methods and to put a stop to them. The Legislature was not dealing with traders in commodities, but with the vital interest of public health, and with a profession treating bodily ills and demanding different standards of conduct from those which are traditional in the competition of the market place. The community is concerned with the maintenance of professional standards which will insure not only competency in individual practitioners, but protection against these who would prey upon a public peculiarly susceptible to imposition through alluring promises of physical relief. And the community is concerned in providing safeguards not only against deception, but against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous. What is generally called the "ethics" of the profession is but the consensus of expert opinion as to the necessity of such standards.

It is not answer to say, as regards appellant's claim of right to advertise his "professional superiority" or his "performance of professional services in a superior manner," that he is telling the truth. In framing its policy the Legislature was not bound to provide for determinations of the relative proficiency of particular practitioners. The Legislature was entitled to consider the general effects of the practices which it described, and if these effects were injurious in facilitating unwarranted and misleading claims to counteract them by a general rule even though in particular instances there might be no actual deception or misstatement.

It is interesting to note that one of the authorities cited by the Supreme Court in support of its decision was a case which arose recently in New York State. In that case (259 N. Y. 358) the right of a dentist to advertise by elaborate electric signs was tested out. Under the Rules of the State

Board of Regents, among the practices considered unprofessional and objectionable were the following:

1. Any advertising statements of a character tending to deceive or mislead the public. . . .
4. Advertising by means of large display, glaring, illuminated or flickering light signs.

The City Clerk, on the authority of the said Rules refused to issue a permit for two large electric signs to be displayed outside dental offices, and proceedings were taken to compel the City Clerk to issue the desired permit. The Court of Appeals in sustaining the action of the City Clerk stated in its opinion:

. . . Not only is the Board of Regents, as head of the educational system of the State the statutory guardian of the policies of the State in relation to curbing deception or fraud by those subject to its supervision but its specific supervisory powers over the practice of dentistry enable it, within reasonable limits, to prescribe canons by which conduct deemed by it, in the exercise of fair judgment, to be unprofessional and objectionable may, in the interest of rescuing that profession from vulgar commercialism, be banned. Prohibition against the use of flamboyant signs by members of a profession cannot be said to be unreasonable.

Claimed Negligence in Removal of Tubercular Kidney

Dr. A, who specialized in neurology, examined a woman on July 1, 1931, and made a diagnosis of tuberculosis of the left kidney. After several delays by the patient, the doctor placed her in a private hospital and under a general anesthesia went in and found the kidney to be tubercular, removed it, and sutured the wound in the usual way. The plaintiff had an uneventful recovery in the hospital and the doctor continued to treat her up to the following March.

Thereafter the doctor submitted a bill which the husband refused to pay. The doctor sued for his bill and a counterclaim was interposed charging the doctor with malpractice. The case duly came on for trial and after a jury was picked both counsels appeared before the presiding judge. The patient's attorney settled the case paying a substantial part of the doctor's bill and withdrawing the counterclaim for malpractice, thus satisfactorily disposing of this matter.

NEISSERIAN MEDICAL SOCIETY TO HOLD MEETING

All who are interested are cordially invited to attend the annual meeting of the American Neisserian Medical Society to be held on June 11, 1935, at the Claridge

Hotel, located in Atlantic City, New Jersey. Dr. Oscar F. Cox, Jr., of 475 Commonwealth Avenue, Boston, Mass., is the Secretary.

Across the Desk

A new respect for the fluoroscope is felt by a Kansas City man, Ralph J. Anderson, says an AP dispatch from that city. He walked into a doctor's office for a physical examination bearing \$15 in his billfold—a \$10 bill and a \$5 bill.

The physician placed Anderson under the fluoroscope.

When the examination was finished Anderson asked: "How much do I owe you?"

"Fifteen dollars," the physician replied.

"That fluoroscope," remarked Anderson, "certainly sees everything."

A young lady of Truckee, Calif., fired a bullet through her head one day last summer, and as a result very nearly became unconscious. The bullet entered the right temporal region and came out on the left side at a little higher level. It was five

the American medical forces in France in the war. A British Tommy, it seems, suffered a brain injury, so that surgeons removed the entire brain for repairs, renovation, and general overhaul, and told him to come back for it in ten days or two weeks. Immediately, however, the Tommy began to be promoted, and in ten days was on the General Staff. When he entered the hospital, ablaze with gold lace, and asked for his brain, the chief surgeon said: "No, you are on the General Staff now. If you had a brain you would be quite unfitted for the place."

Critics of the proposed Child Labor Amendment to the Federal Constitution feel encouraged over its rejection in 16 legislatures this year. This is the eleventh year it has been making the rounds of the legislatures, and so far it has gained 24 approvals, out of a total of 36 necessary to win. Four states ratified this year, but it can never win if the 16 opponents stand fast, as 13 opponents are enough to defeat it. Its grave defects have been repeatedly treated in these pages.

New medical regulations in the land of Hitler forbid a specialist to designate two branches of medicine as his specialties, even if he is an expert in two branches. He must mention only one on his sign, cards, letter heads, prescription blanks, and so on. His sign, too, must not mention his hospital activities and must not be illuminated at night. In this country the doctor tries to keep the patient quiet; in Germany the idea seems to be to keep the doctor quiet.

Another regulation forbids the doctor to move in the summer season to some resort where he may interfere with the practice of the local medical men. He must "stay put." The local fellows complained that the city doctors flocked to the resorts in the summer and took the cream of the practice, while they nearly starved. Now the city man must keep his hands off.

Peau, the great French surgeon of the last century, always wore a dress suit when operating at the Hotel Dieu or in his own hospital, recalls Dr. Robert T. Morris, in his delightful reminiscences, *Fifty Years a Surgeon*. An interesting courtesy to visiting surgeons, formerly quite the thing, was abolished by Lister. It was customary for the visitor to have the privilege of inserting



hours before she was received at the hospital, and brain substance was oozing from both bullet holes. She was given tetanus antitoxin and the wounds were cleansed and dressed, fragments of bone picked out, and so on, but nothing radical or unusual was tried. She was "slightly irrational" for four days, and had a little fever for ten days, but after that she improved so rapidly that in one month she returned to her home, where she now enjoys normal physical and mental health.

These details were given in letters to *California and Western Medicine* and to the *JOURNAL* by Dr. Alfred H. Tickell, of Nevada City, who attended her.

The happy outcome of the incident, which really caused less inconvenience than a splintered arm or leg does sometimes, reminded one of our editorial management committee, of a humorous story current in the British ranks when he was an officer in

his finger in the wound, being very careful, however, not to soil his coat sleeve!

"I hear your operation was a great success," said a friend to a Kansas surgeon.

"Not quite," he replied.

"Why not?"

"Because," replied the surgeon, "no operation is a complete success until it is paid for."

The "blood test" may now be used in court actions in New York to determine who is the father of an illegitimate child, under a law signed by the Governor on March 26. Perhaps it would be better to say, "to determine who is not the father," for the accused man and the child may belong to the same blood group without necessary relationship, but if they are found to belong to different blood groups, then the relationship is ruled out. In that case the man goes free, with a sigh of gratitude to the wonders of modern science. This is expected to prevent the unwed mother from looking around her circle of friends and picking out the wealthiest to sue for the child's support. Even now the defendant may be entirely innocent, yet lose if his blood group is wrong, and his legal case fragile. This test is used in such cases in nine countries in Europe, and Dr. A. S. Wiener, of Brooklyn, who is deeply interested in it, declares that one-sixth of the 1,000 disputed paternity cases tried in New York annually "could be immediately disposed of if blood-tests were made."

Idaho is reported to be the only State in the Union without a department of health and with no State medical officers. This year leading physicians of the State promoted a bill to remedy the situation, and it passed the house and was favored by the governor, but was defeated in the senate. Such is politics.

The entire life of a child may be marred by defective eyesight in school, if it is not corrected. Proper study is impossible; the child is stigmatized as dull and develops a sense of inferiority; straining the eyes makes them worse and brings on nervous troubles. These facts give a dark significance to the revelation that some 3,000,000 school children in the United States—one-eighth of the entire school population—are handicapped in their education by defective eyesight, as disclosed in the report of a Joint Committee of the National Education Association and the American Medical Association co-operating with the National

Society for the Prevention of Blindness. It is a regrettable fact that teachers and parents often pay too little attention to this matter until the family doctor points out its importance.

Inquiries received by the State Health Department show that many doctors are not aware of the fact that specimens for bacteriological examination do not require first class postage even when accompanied by the written information requested on the history forms. The specimens are accepted at third or fourth-class rate of postage, according to weight, and are pouched with letter mail, under Section 589, paragraph 4, of the postal laws. This information has been confirmed to the State Health Department by the third assistant postmaster general. A special delivery stamp insures quick delivery.

Physicians who feel concern over the quality of the local water supply may now get action from the State Commissioner of Health, who is authorized by a law recently signed by the Governor to order improvements in any public water supply which is of such poor physical quality or so inadequate as to constitute, either directly or indirectly, a menace to health.

Figures are out to the effect that 189,677 Germans have been deprived of reproductive powers under the new sterilization law, nearly all of them on account of feeble-mindedness, split personality, or epilepsy. A rather comic attempt to blow the trumpet for the new reform was made the other day by a certain Dr. Fritz Lens, who said that "in former years an average of about 20,000 feeble-minded children were born each year, but that this, thanks to Nazi measures, had been reduced to about 10,000."

What Dr. Lens ignores is that in former years the total German birth rate for all kinds of minds, feeble, powerful, and middling, was more than twice the present figure, and the terrific drop has been due, not to "Nazi measures," but to measures of quite another sort. Lenses are sometimes rather distorting.

Ninety-four poisons are used in the industries of a single manufacturing State, as reported by the labor commissioner. Physicians and nurses in manufacturing centers can obtain information from the United States Department of Labor about the poisons used in various processes, and the proper methods of treatment.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review as dictated by their merits or in the interests of our readers.]

International Clinics Volume I, forty fifth series, edited by Louis Hamman M D Octavo of 310 pages, illustrated Philadelphia, J B Lippincott Co, 1935 Cloth \$3 00

Health Dentistry for the Community. A Study of Present Needs and General Trends in the Provision of Community wide Dental Care By the Committee on Community Dental Service of the New York Tuberculosis and Health Association Octavo of 85 pages Chicago The University of Chicago Press 1935 Cloth, \$1 00

Diseases of the Skin By Richard L Sutton, M D, and Richard L Sutton, Jr, M D Ninth edition Octavo of 1433 pages, illustrated St Louis C V Mosby Co, 1935 Cloth, \$12 50

Methods of Treatment By Logan Clendinning M D Fifth edition Octavo of 879 pages illustrated St Louis, C V Mosby Co, 1935 Cloth \$10 00

Physiology in Modern Medicine By J J R MacLeod, M B Seventh edition Octavo of 1154 pages illustrated St Louis, C V Mosby Co, 1935 Cloth, \$8 50

Physical Diagnosis By Warren P Elmer, M D Seventh edition Octavo of 919 pages, illustrated St Louis, C V Mosby Co, 1935 Cloth, \$8 00

A Practical Manual of Diseases of the Chest By Maurice Davidson, M D Octavo of 528 pages illustrated New York Oxford University Press, 1935 Cloth, \$14 00

A Manual of Obstetrical and Gynaecological Pathology By John H Teacher, M D Octavo of 407 pages illustrated New York Oxford University Press 1935 Cloth, \$15 25

Physical Diagnosis By Richard C Cabot M D Eleventh Edition Octavo of 540 pages illustrated Baltimore, William Wood & Company 1934 Cloth \$5 00

A new edition of this splendid book from which so many have learned the essentials of physical diagnosis is always welcome. In its exposition of the basic principles of the subject of which it treats it has never been surpassed, and probably not equalled.

In this edition the main parts of the older ones have been retained and among the new chapters are those dealing with the Electrocardiogram, Subacute Infectious

Parenthood Design or Accident? A Manual of Birth-Control By Michael Fielding M D, Duodecimo of 239 pages illustrated New York, The Vanguard Press 1935 Cloth, \$2 50

The Care of the Aged, the Dying and the Dead By Alfred Worcester M D Duodecimo of 77 pages Springfield Ill, Charles C Thomas 1935 Paper, \$1 00

The Nervous Patient A Frontier of Internal Medicine By Charles P Emerson M D Octavo of 453 pages Philadelphia J B Lippincott Co 1935 Cloth, \$4 00

Martin's Principles and Practice of Physical Diagnosis By Robert F Ioch M D Duodecimo of 213 pages, illustrated Philadelphia, J B Lippincott Co, 1935 Cloth, \$2 00

Useful Drugs By Robert A Hatcher, M D, and Cary Eggleston, M D Ninth edition Duodecimo of 203 pages Chicago American Medical Association, 1934 Cloth, \$6 00

Diseases of Children. Third edition with contributions by 36 authors edited by Hugh Thursfield D M, and Donald Paterson M D First edition by Sir A E Garrod D M the late Frederick E Batten M D and Hugh Thursfield D M Octavo of 1152 pages Baltimore William Wood & Co, 1934 Cloth, \$10 00

A Textbook of Surgery For Students and Physicians By W Wayne Babcock M D Second edition revised Quarto of 1312 pages illustrated Philadelphia W B Saunders Co, 1934 Cloth \$10 00

REVIEWED

Endocarditis and Coronary Heart Disease The section on Tuberculosis has been enlarged and there are numerous other additions and corrections

W E MCCOLLUM

Practical Obstetrics for Students and Practitioners By P Brooks Bland M D and Thaddeus I Montgomery M D Second Edition Octavo of 730 pages illustrated Philadelphia F A Davis Company, 1934 Cloth \$8 00

This is an excellent textbook intended to bridge the gap between the large work and the manual. It is well named, 'practical'

Illustrations are excellent, and the colored plates are beautiful. The Jefferson practice of obstetrics is sound and conservative, and the entire field of obstetrics is well covered. It would be difficult to think of anything additional that might have been included. It is not only a very handy reference book for the general practitioner, but the specialist, too, will find the long chapter on obstetric jurisprudence interesting.

CHARLES A. GORDON

Sex-Hygiene. What to Teach and How to Teach It. By Alfred Worcester, M.D. Octavo of 134 pages. Springfield, Charles C. Thomas [c.1934]. Cloth, \$2.50.

This book, presenting in one small volume several lectures delivered before various groups, including medical societies, student bodies, girls schools, and alumni associates, offers different approaches to an important problem in very clear and candid rhetoric. It is a book which all mothers and fathers might read with profit.

N. P. RATHBUN

Allergy and Applied Immunology. By Warren T. Vaughan, M.D. Second Edition. Octavo of 420 pages, illustrated. St. Louis, C. V. Mosby Co., 1934. Cloth, \$5.00.

In this edition of his book, the second, the author adheres closely to his original plan of presenting an outline of the subject of allergy devoid of technical details and terminology. It is primarily intended for the patient and for the physician who seeks an elementary introduction to the subject of allergy. The author has made no important changes in the original framework of his book. There are a few minor additions which bring the material and bibliography up to date.

The single important innovation in this edition is the inclusion of an appendix which contains miscellaneous questionnaires, tables, diagnostic and therapeutic diets, food lists, recipes, and instructions which should be of assistance to both the patient and the physician in the management of allergic cases.

MATTHEW WALZER

A Text-Book of Medical Psychology. By Ernst Kretschmer, M.D. Translated by E. B. Strauss, M.D. Octavo of 274 pages, illustrated. New York, Oxford University Press, 1934.

This work systematizes our present knowledge of medical psychology. The various sciences such as anatomy, physiology, biochemistry, and psychiatry are utilized so as to throw light upon such problems as human thought, feeling, and conduct in health and disease. While Freud's contributions are

made use of, the author does not attempt to build up one system of approach.

The text is divided into five parts: Part 1 deals with the chief psychic functions and their anatomical and physiological basis. Part 2 describes the psychic apparatus and its evolution. Part 3 deals with instinct and temperament. Part 4 is concerned with personality and reaction types. Part 5 is entitled *Practical Medical Psychology*. The latter is especially for students.

The book contains a bibliography together with an index of names and subjects. It is recommended especially for students and general practitioners.

STANLEY S. LAMM

The Anatomy of Surgical Approaches. By L. C. Kellogg, M.D. 12mo. of 134 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$1.50.

This book, of 134 pages, is an attempt to cover, in a brief way, the broad fields of surgical and surface anatomy as applied to certain surgical procedures, not, in the words of the author, so commonly performed, such as ligations of arteries, the isolation of nerves, and the approach to bones. Certain other minor surgical conditions are discussed, however, such as infections of the hand, with special reference to the anatomical findings. The author uses the expression, "Laboratory Procedures," to describe dissections and anatomical preparations in the elucidation of examples of surgical pathology, as in his description of dislocation of the proximal phalanx of the thumb.

The illustrations, mainly in outline, are none too numerous for a work of this kind. The reviewer was not favorably impressed by the use of five illustrations of a ligation of the lingual artery and an incomplete description, without illustrations, of the Smith-Peterson approach to the hipjoint.

An outlined description of, at times, important surgical procedures, as has been attempted in this book, is entirely inadequate to instruct the tyro or to satisfy the experienced operator.

JOSEPH RAPHAEL

A Text-Book of Histology. Functional Significance of Cells and Intercellular Substances. By E. V. Cowdry. Octavo of 503 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$5.50.

This work appears truly to be a masterpiece. It is a better reference book than a student's guide to a new subject like microscopical anatomy.

The inter-relationship between cells and tissue fluids is very fascinating and important, especially in the manner presented.

NATHAN REIBSTEIN

THE FUNCTIONS OF THE AMERICAN MEDICAL ASSOCIATION

Address Delivered at the 129th Annual Meeting of the Medical
Society of the State of New York, Albany, May 14, 1935

WALTER L. BIRRING, M D
President, American Medical Association
DES MOINES, IOWA

There is some hesitation in presenting to the Medical Society of the State of New York, famous for its traditions of medical leadership, the functions and purposes of medical society organization. It is only that the larger parent Association reflects a more general interest and responsibility of the membership of the country as a whole, that it is worthy of this consideration.

The American Medical Association represents a unity of organization that is unique and, above all, democratic, in which the County medical society constitutes the unit of membership. With its 100,000 members it has grown into the largest medical organization in the world and is distinctly representative, being open to all reputable physicians and each individual having an equal interest in its welfare.

One of the important Committees appointed at the first session of the Association in Philadelphia in 1847 was that which was to concern itself with the advancement of medical education and the standards of practice.

Ever since, this Association has recognized its responsibility and obligation to encourage every opportunity for better medical training and practice of the art as well as constantly furthering all available means for the continuing study and enlightenment of the experienced physician.

At the turn of the century a new era began to dawn in American medicine. It was largely the heritage of the remarkable contributions of the labors of

Pasteur, with the new conception of the causation of infectious diseases, and the production of ammunition for their future control, likewise of wound infection with the new triumphs of anti and aseptic surgery by the masters, Lister and Billroth. All of this brought forth a revolution in methods of education and extension of medical service into many new fields.

The leaders in our Association recognized the need of a complete transformation in the training of physicians in this country which was crystallized in the establishment of the Council on Medical Education in 1904. This was the first step in meeting the educational challenge of this critical period, and it will ever be to the eternal credit of the organized medical profession that it had the courage to put its own house in order. The high station that medical education has attained in America is the outcome of more than a quarter of a century of careful study and coordinated efforts by a number of agencies in which the American Medical Association has always taken a leading part.

This evolution in medical training and methods of practice has brought in its train many new problems directly influencing the critical period that we are now experiencing. The impact of the laboratory was felt particularly in the teaching of the fundamental sciences, in clinical diagnosis and the care of the patient at the bedside, in the extension of the teaching hospital with consequent enlargement of physical and teaching equipment.

of medical schools, and in the lengthening of courses of study; and the remarkable growth of specialism have all distinctly influenced a changing order in the economic life and professional activities of the medical practitioner. The work of the Association during the past thirty years has been closely allied with the advancement of American medicine and all its energies and facilities have been devoted to the interests of the individual doctor everywhere to keep him informed of every stage of progress in the prevention, recognition, and treatment of disease.

Operating under the wise guidance of the Board of Trustees and governing policy of the House of Delegates the Association has developed into the fullness of its present complete organization. Every member will find a visit to Association headquarters most interesting; but, as this opportunity is not often readily available, the Board of Trustees has had a moving picture prepared which is sent out to State and local societies upon request that gives a general conception of the magnitude of the physical plant and the varied activities in which the Association is engaged. The Association is housed in a modern fireproof building, free from indebtedness, in which the administrative officers and some four hundred and fifty employees carry on their work.

The press rooms—with adjoining rooms for composition, binding and mailing, comprising the mechanical department—always form an interesting visit.

The large Goss rotary press, costing \$100,000, two stories high, operated only by three men, is capable of printing ninety-six *Journal* pages at one time, can produce twelve colors in addition to the black, and print 4,500 *Journal* pages every hour. The gathering, stitching, gluing, and trimming is done at one time by machine.

Aside from the *Weekly Journal*, the Association publishes nine special *Journals*, a monthly *Bulletin*, *Hygeia*, *A.M.A. Directory*, *Quarterly Cumulative Index*, *New and Non-official Remedies*, *Useful Drugs*, and numerous other publications.

The editorial department is under the supervision of the brilliant editor, Dr. Morris Fishbein, who with three assistant editors, nine translators, fifteen manuscript editors, and an efficient corps

of abstractors and stenographers, carries out day after day this mass of editorial and publishing activity.

The reference library has been constantly enlarged. Aside from the librarian, there are twenty-eight employees at Headquarters and four in Washington, the latter engaged principally at the Library of the Surgeon General. This department reviews books, prepares the *Quarterly Cumulative Index*, covering the important medical literature of the entire world, likewise, the indexes of books published by the A.M.A. and bibliographies (5,000 compiled last year), upon request.

There were also 7,000 periodicals loaned and the Package Library was used by 2,500 physicians during the past year.

Many of the activities of the Association are conducted by its five Councils, Judicial, Medical Education and Hospitals, Pharmacy and Chemistry and Physical Therapy; four Bureaus, Investigation, Legal Medicine and Legislation, Health and Public Instruction and Medical Economics; and three Committees, Foods, Scientific Exhibit and Legislative.

The names of these different groups indicate the functions and purposes for which they are created.

The Council on Medical Education and Hospitals in August each year publishes a complete report on medical education with statistics in the Educational number of the *Journal*. Likewise, in the earlier months of the year it publishes statistics on State Boards and Hospitals in the State Board number and Hospital number, respectively.

The chief activity of the Council on Pharmacy and Chemistry is to supply the medical profession with reliable information regarding new and non-official medicinal preparations which the individual physician, for lack of time or facilities, is unable to supply himself.

Of the four bureaus, that on Investigation is the oldest and the founder, Dr. Arthur J. Cramp, is the present Director.

To indicate one of its many activities, 11,000 inquiries were answered last year, and since its organization thirty-four years ago 300,000 carefully cross indexed cards describing "Quacks and Medical Schemes of a Dubious Character" have been compiled.

The Bureau of Legal Medicine and Legislation is in charge of Dr Woodward, physician, attorney-at-law, and former health officer. At present the questions of Federal and State relief plans for medical service and veterans care in home and hospital, medicinal liquors, and narcotics make this Bureau of increasingly great service.

The Bureau of Health and Public Instruction was created in 1910 to undertake the dissemination to the public of authoritative useful information about medical and health matters. Through the monthly magazine *Hygeia*, radio health talks, exhibits, and co-operating with medical societies and organizations like the National Educational Association and National Congress of Parents and Teachers, the Association has been able to render great service in the field of public health and preventive medicine.

The Bureau of Medical Economics, created in 1931 under the direction of Dr Leland, has fulfilled a most important function. It seems almost providential that all the resources should be ready and available during this emergency economic period. The Board of Trustees have wisely enlarged the room space for the Bureau as well as the technical and clerical personnel to meet the constantly increasing duties.

The Committees on Foods, Scientific Exhibit and Legislation each promote important functions relating to medical society organization.

This brief outline does not include certain further activities of the Association as special grants for scientific investigations, stimulations of scientific exhibits, and collection of biographic data of all members. From this it is apparent that the Administrative Officers, Trustees, and House of Delegates have endeavored to faithfully interpret the needs of those developments incident to the evolutionary changes in medical training, licensure procedure, and postgraduate education.

It must likewise be evident that such remarkable changes occurring in an age of unusual technologic and industrial development have brought medical economic problems such as were unknown a generation ago.

Furthermore, the production of more doctors than society can properly re-

ward, a gradual recession of all frontiers with its greater concentration in urban population, and the approaching balance in birth and death statistics, are all significant factors influencing the economic status of the practitioner and specialist of today.

Our General Secretary in frequent reports directed attention to the situation, that medicine was again approaching the crossroads as regards economic readjustment pertaining to the delivery of medical service, but it required the impact of a cyclonic economic depression to awaken the consciousness of the medical world to existing conditions.

Voluntary non-medical agencies, philanthropic foundations, and various lay organizations for a number of years devoted their energies to present to the public the results of studies relating to the cost and delivery of medical service and then, without proper qualifications, proposed remedies for the conditions found to exist according to these studies.

This led to confusion of issues and misunderstanding and for the time being influenced some from our own ranks into uncertain and strange by paths of economic philosophy.

The Board of Trustees acting under authority of the House of Delegates were prompt to recognize that every effort must be centered on molding anew the thought of our membership, and better to grasp the meaning of a changing economic order and its effect on the practice of medicine, as well as the dangers incident to certain plans proposed by non-medical agencies.

Wise provisions were made to greatly enlarge the facilities of the several Bureaus concerned, Medical Economics, Medical Legislation and Public Instruction—and to marshal these energetic forces under the stimulating genius of the Editor and General Secretary in conjunction with able leaders in the field to spread the gospel of sound thinking on medical economic problems to every section of the country.

If you would know whether this campaign of education has been effective, it needs but to make comparison of the clear and logical discussions heard in every medical society today with those of but a short year ago.

About a year ago a certain State Medical Society was enthusiastic in its proposal for a definite state plan of health and sickness insurance, yet six months later in regular session it placed the entire proposition back again in refrigerative channels. The medical profession of the State of Washington is known for some radical ventures into the field of medical economics, yet its State Medical Society was among the first to endorse the action of the February Special Session of the A.M.A. House of Delegates.

The medical world of the Pacific Coast is a domain in itself—particularly California where cultism is in its glory. Living on the edge of the last frontier, touched by the flavor of the Far East and the Orient, its people have developed an emotional element that worships every "ism" promising relief from human distress, physical, mental, or economic.

Yet through it all medicine has nevertheless preserved its best traditions. Nowhere is there a rarer collection of precious medical books than in the Lane library in San Francisco, or a more beautiful and complete medical home than that of the Los Angeles County Medical Association.

Recent events would seem to indicate that some of the medical leaders in California are deluded by the attractions of compulsory health and sickness insurance. We trust that the results of the successful development of plans in Alameda and San Diego Counties for the adequate medical care of all its people, will soon dispel these mirages of hope and that a better judgment will prevail.

There can be no variance of opinion that the doctor of the South and particularly the South Eastern section has felt the economic pressure of these trying years. Yet Florida with its 1,500 miles of shore line manifested a professional spirit and interest in an economic discussion by attending in large numbers a midwinter session of the State Medical Society at Orlando early in February. It is likely that the prospect of a large citrus crop and an even larger tourist crop is a factor, but the determination to maintain existing medical standards, manifest everywhere, augurs well for the future.

In States like Georgia, Alabama, the Carolinas, and the old Dominion, a

changing economic order for the medical practitioner has almost become a tradition. Yet in their devotion to educational ideals, medical society organizations, good books, and that gracious gentility characteristic of the Southland, they too are determined to solve their economic problems.

The impression that lingers of the last annual meeting of the Nebraska State Medical Society is the address of its president. Rarely, in the light of recent events, has a clearer analysis been presented of the practitioner's relation to the newer economic problem, coming from one whose entire professional life had been spent in a rural community far from any large metropolitan center.

The mid-Central States, including Minnesota, Iowa, Illinois, Indiana, Ohio, Michigan, and Wisconsin have economic problems much in common. The hazards of industry as well as those of agriculture have definitely affected the practice and welfare of the medical practitioners of these States. Yet nowhere is medical education and the promotion of graduate courses maintained on a higher level.

Again, in practically all of these States County agreement plans for the care of the indigent, emergency medical relief, and comprehensive means for providing adequate medical care for the different income groups, have been developed that serve as model plans for other States.

It is truly significant that, in spite of this depression period, a time that has tried the very souls of men, the interest in scientific medicine and its continued advancement has been constantly maintained. If you would grasp the rugged spirit that dominates our colleagues of North Dakota, you should attend an annual meeting at Fargo, when the temperature is 100 degrees in the shade, the dust-laden atmosphere making visibility uncertain, a rain almost unknown, and yet withal there is a smile on every doctor's face and he looks with confidence into the future. The scientific and clinical program presented would be creditable to a society meeting in a large metropolitan center and was further distinguished by an attendance of 65 per cent of the society membership, meeting in a city on the extreme eastern border of the State.

We are inclined to regard the medical

profession of Arkansas, Oklahoma, or even of Kansas as being on the borderland, yet a visit to any of its large medical gatherings will develop many a surprise. When annual postgraduate clinical courses can attract an attendance of 800 at Oklahoma City, 1,100 at Kansas City, and 700 at Omaha, it indicates that the physicians of the Southwest are eager for new knowledge of medicine and manifests the true spirit for continued study. In all mid-western and southwestern States, the State societies in annual session have endorsed the action of the special session of the A M A House of Delegates.

Such are some of the impressions gained by personal visits and indicate definite results of the educational efforts of the American Medical Association and its constituent State and County societies.

The discussions presented at this session of the Medical Society of the State

of New York are likewise distinctly encouraging, indicating a harmony of thought and understanding definitely at variance from a year ago.

The American Medical Association conceives its function to be that of guide, counsellor and when possible to point the way. For these purposes all the energies and facilities at its command are constantly at the service of its constituent societies and individual members. It will, however, require a continued faith and earnest co-operation to gradually work out a solution that will conserve the interests of physician and patient.

No one can view the situation as a whole and not have the fullest confidence that the enlightened doctor of today will adapt himself to the demands of a new economic order and still maintain that idealism of service that has been the sustaining tradition in every period of a changing society.

1935 GRADUATE FORTNIGHT OF THE NEW YORK ACADEMY OF MEDICINE

The Eighth Annual Graduate Fortnight of The New York Academy of Medicine will be held October 21 to November 2 and will be devoted to a consideration of "Diseases of the Respiratory Tract."

Eighteen important hospitals of the city will present co-ordinated afternoon clinics and clinical demonstrations. At the evening meetings prominent clinicians from various parts of the country who are recognized authorities in their special lines of work will discuss various aspects of the general subject.

A comprehensive exhibit of books and of anatomical, bacteriological, and pathological specimens and research material will be assembled. Demonstrations will be held at regular intervals.

Among the features to be presented at the meetings, in the clinics and in the exhibit will be

The problem of asphyxia
Apparatus for resuscitation
Poisonous gases Gas masks
Allergy in its relationship to diseases of the respiratory tract
The common cold
Influenza
Sinus disease from infancy to old age
Diseases of the larynx, trachea and main bronchi
Whooping cough
Atelectasis and massive collapse with their concomitants cyanosis and dyspnea
Foreign bodies and tumors

Mycotic infections
Pleurisy
Asthma
Lobar, lobular and bronchopneumonia
Chronic pneumonia
Diseases of the mediastinum
Bronchiectasis
Pneumokonirosis
Emphysema
Thrombosis and embolism
Abscess and gangrene
Pulmonary tuberculosis
Medical and surgical approach to empyema
Surgery of the chest
Postoperative pulmonary complications
Clinical and laboratory diagnostic methods
Drugs, sera, vaccines, and other forms of therapy

Speakers at the evening meetings will include Drs. J. Burns Amberson, George Blumer, Henry Chickering, Lloyd F. Craver, Alphonse R. Dochiez, Leroy U. Gardner, Yandell Henderson, Charles J. Imperatori, Chevalier L. Jackson, Adrian Lambert, Howard Lilienthal, Harrison S. Martland, Jonathan C. Meakins, James Alex. Miller, Charles T. Porter, Maximilian A. Ramirez, Arnold R. Rich, David Riesman, Charles Hendee Smith, and Harry Wessler.

The profession generally is invited to attend. A complete program and registration blank may be obtained by addressing DR. FREDERICK P. REYNOLDS, New York Academy of Medicine, 2 East 103rd Street, New York City.

PREVENTION OF SECONDARY TRAUMATA IN THE TREATMENT OF AUTOMOBILE FRACTURES

WILLIAM DARRACH, M.D., Sc.D., LL.D.
NEW YORK CITY

One of the most important forms of treatment of any surgical condition is prevention. A great deal has been accomplished in recent years in the attempt to prevent automobile injuries. Traffic regulations, better roads, better brakes, more careful driving, are all very evident but in spite of this, the increase in speed and power of cars has more than offset the other factors so that the total number of automobile injuries has increased.

There is another form of preventive work which is steadily improving, which indubitably merits professional discussion; viz., the prevention of unnecessary secondary traumata. The original injury may be limited to a break in the bone and comparatively little soft part injury. Only too often, however, secondary traumata cause more damage than the original injury. What happens to the patient between the time of his original injury and the institution of definite therapeutic measures can be controlled and should be controlled to a large extent. A large proportion of "secondary traumata" can be and should be prevented. What are the factors which determine the end result in any fracture?

In the first place, naturally, the severity of the injury is of great importance. It is known that single fractures heal more promptly than the comminuted type and simple fractures better than compound. Small bones become solid sooner than large bones. Cancellous bone heals faster than cortical bone. Bones broken during the growth period not only heal faster but tend to show late changes which overcome angular and lateral deformity and even shortening. This latter is most marked in the first year of life and decreases to puberty when it stops. The site of the injury is important, as for example the neck of the femur and the carpal scaphoid, which both give a discouraging prognosis.

Three other principal factors are: The amount of displacement, the interference

with blood supply, and the associated injuries.

The repair of bone is primarily the repair of connective tissue. There is hemorrhage from the broken ends and the torn periosteum. The blood clots and then along the fibrin network new blood vessels grow out which become surrounded by new connective cells—ordinary granulation tissue. After a few days the secondary process, peculiar to bone, begins and calcium is deposited around the blood vessels, at first irregularly, but later in more orderly fashion; i.e., calcification is followed by ossification. These new blood vessels must come from old ones in the neighborhood, therefore the greater the damage to the local blood supply, the greater the area to be repaired.

If the bone is not only broken but the fragments displaced, more periosteum is found stripped from the adjacent bone. This means tearing of those small periosteal vessels. If bone removed from the broken ends is examined under the microscope, the nuclei will be discovered to be dead in the contained cells. Where the periosteum has been stripped up a goodly distance, this area of devitalized bone becomes surprisingly extensive. The problem of repair is not only to grow callus or new bone between the broken ends but there must also be a revitalizing of the adjacent dead zone. Thought of in this way, the primary displacement of fragments takes on a greater importance. The amount of permanent displacement also determines the time required for healing as well as the later functional disability. If the displacement is not reduced the amount of new bone required to restore the needed strength is greatly increased. It may not always be wise to keep trying for perfect reduction, but the better the alignment the quicker and firmer the repair will be. Unless the patient's condition forbids it, the best time for closed reduction is as soon as possible after the injury; always before

the clot is organized and if possible before the secondary edema and infiltration of adjacent soft parts has occurred.

The local blood supply can be interfered with in other ways than by periosteal stripping. The sharp edges of the displaced fragment may easily injure larger blood vessels near by. This may occur at the original accident or during careless handling and unwise examinations. Later on the circulation may be impeded by the position of the injured part, as too great flexion at the elbow, too tight a bandage, too dependent a position.

It is uncommon to see a patient with a fracture where the broken bone is the only lesion. Associated injuries usually occur, are often the main lesion, and almost always require treatment. An extreme example is a fracture of the skull. Here the broken bone may be quite unimportant in itself and the associated injuries to the brain, its membranes and blood vessels prove fatal. What part of these associated injuries are preventable? Perhaps most of them.

It is evident that the amount of displacement, interference with the blood supply, and the amount of associated injuries to soft parts are greatly influenced by additional traumata received after the original injury during transportation, examination, and attempts at reduction. Consider what actually happens when a bone is broken.

The driver of a car sees a truck approaching and slows down. A boy runs out from behind the truck just in time to be hit by the car. Suppose the driver of the car is a doctor who examines the boy and finds that there is tenderness over the boy's tibia at a point where localized swelling quickly develops, yet there is no deformity and evidently no displacement. He applies the Thomas splint which doctors ordinarily carry in their cars and the boy is carefully picked up and carried to a hospital. Here x-rays are taken which show a transverse fracture without displacement. There is no evidence of nerve injury and apparently the soft parts have been damaged but little. A permanent splint is applied and he is put to bed and traction set up and the healing process begins. The problem of repair would seem to be a simple one. There is a minimum of periosteal stripping, the

blood supply has been little interfered with, and the adjacent soft parts are but slightly damaged. In a minimum space of time, the boy is walking about with a straight, strong leg and soon resumes his former occupation with no disability.

However, imagine a similar accident where kindly bystanders rush to the boy's aid, lift him to his feet to help him walk to the sidewalk, only to see that he cannot bear his weight and something gives way whereupon he again falls to the ground with increasing pain. The secondary trauma has already begun. The sharp spike of the lower fragment is thrust into the adjacent muscles, lacerating the fibers and dividing more blood vessels. More periosteum is stripped up from the bone, destroying more blood supply. Perhaps nerves are torn or divided. The sharp edge of the upper fragment also tears off periosteum on the other side, tears through the fascia, may even penetrate the skin. The kindly bystander again comes to the rescue and picks him up in his arms, or perhaps two people carry him, if the boy is heavy. As he is being carried to a taxi or car, the foot of the fractured leg dangling and swinging back and forth, no one realizes what the bone ends are doing. Then he is folded into the back seat and his foot lifted up into a lap or onto the seat and the ride begins. Over bumps and around corners they hurry the patient to the hospital and the additional trauma goes on steadily. At the hospital he is clumsily unfolded out of the car and carried in, leg again dangling, then placed on a stretcher or a bed. The orderly, who comes eagerly forward to help prepare him for the doctor, takes off the shoe, perhaps with difficulty because the foot wobbles, and then the sock. The drawers are usually cut away. Seeing the livid mess, he telephones the interne that there is a fracture case in the emergency ward, then leaves to go about his other duties.

After so many minutes or hours the interne arrives, moves the leg about, says: "Yes, that's broken all right. Here, Jim, come here. Did you ever feel such beautiful crepitus?"

Perhaps there is doubt as to position of fragments, requiring additional manipulations. "Is the X-Ray Room closed?" he asks, then announces: "Well, we'll put

AGES OF PATIENTS

Under 2 years.....	1
2 to 5 years.....	9
5 to 10 years.....	36
10 to 15 years.....	44

PHYSICAL CONDITION

Excellent	57
Average	30
Poor	3

Noteworthy is it that the physical condition was excellent in 57, average in 30, and underweight and poorly nourished in 3. In these 3 surroundings other than the physical condition apparently accounted for the neurosis. Of particular interest is the number of children in the family.

- In 34 the patient was the only child
- In 42 there were two children
- In 10 there were three children
- In 1 there were four children
- In 2 there were five children
- In 1 there were six children

In 85½ per cent the patients were from one or two child families. It also is to be noticed that in the two child families, the patient was almost invariably the older child and usually with quite a wide spread between the respective birthdays. In the estimation of our statistics we were surprised to find there were 61 males and 29 females.

We look upon 9 mgs. of calcium in 100 c.c. serum as the low normal and 4 mgs. in 100 c.c. serum as the low normal phosphorus.

The Kramer Tisdall method was used for estimating blood serum calcium and

the Benedict Theiss method for estimating inorganic phosphorus.

Calcium normal.....	81
Calcium low (7.94 to 9 mgs.).....	9
Phosphorus normal	83
Phosphorus low (3.12 to 3.84).....	7

While exaggerated nervous manifestations were shown by the low calcium group, they differed in no way from others in whom the calcium and phosphorus determination was within the normal; 4 in whom the test was repeated at a later period were found within the normal.

Looking upon the blood serum as a medium of transportation of calcium and phosphorus, the slight variation from the normal would appear to be of no clinical significance.

In every child a complete physical examination, including the blood chemistry study, failed to show physical ailment that might account for the neurosis. In all, the imbalance proved to be emotional in nature, to be accounted for by domestic discord, unfavorable family contacts, unfair demands, unwise indulgence, unsuitable entertainment, and in many cases too much wealth.

Comment

Attention is called to the possible hidden sources of some of the neuroses common to children. The preponderance of boys over girls is to be explained largely in that more demands are placed upon the boy; particularly if he is the only offspring and son of well-to-do parents.

132 WEST 81ST STREET

OIL DEADLY IN THE LUNGS

Oil is excellent in some places, but not in the lungs.

Six cases of fatal pneumonia, caused by mineral oils and animal fats drawn into the lungs of infants and adults in small quantities, were reported by Dr. Irving Graef, pathologist at Bellevue Hospital.

The report received vigorous support among the 500 pathologists and bacteriologists before whom it was read by Dr. Graef at the annual meeting of the American Association of Pathologists and Bacteriologists at the Cornell Medical Centre.

Four other doctors cited similar cases in the last ten years.

There was no dissent from the observations of these and other commentators.

According to autopsies of pneumonia

victims, cod liver oil, which is fine for bone building when introduced into an infant's stomach, becomes deadly in the lungs.

It may get into the lungs, as in one case cited, through forcing a reluctant child to swallow the oil by holding his nose. An autopsy, after the infant's death from pneumonia, revealed that the lungs still retained the odor of cod liver oil.

One doctor denounced as a "public menace" the various mentholated mineral oils which are advertised to be dropped into the nose as a protection against colds. No brand was named. The denunciation was general

Plans are under way to distribute pneumonia serum so all physicians in the State will be within 25 miles of a supply.

TATTOOING OF THE NOSE AND FACE FOLLOWING AUTOMOBILE INJURIES

WILLIAM WESLEY CARTER, A M , M D
NEW YORK CITY

Injuries to the nose and face, which are the result of automobile accidents, have been discussed by the author in previous communications. Though he has mentioned the menace of tattooing that may follow some of these injuries, its importance was not stressed nor was it given the place it deserves in the discussion of the subject.

An automobile carries with it an abundance of an indelible stain composed chiefly of finely powdered carbon, dirt, and oil. In the course of time this mixture becomes well distributed along every popular highway by the cars passing over it, each contributing a share of carbon dust from the exhaust.

The injuries at present under consideration are those in which the abraded, cut, or macerated tissues of the nose and face have come in contact with the car or the roadway and have had the carbon, dirt and the like ground into them and securely imbedded. Many times this has been overlooked or was not thoroughly removed at the time of primary treatment of the wound. If carbon is thus included superficially in scar-tissue or in the deeper layers of the skin it is never extruded or absorbed and produces a permanent discoloration resembling a lead-pencil mark.

The stress of circumstances attendant upon the accident enlarges the possibility of this undesirable sequel, frequently this item is discovered only after complete healing has taken place, after the patient is already permanently disfigured. *This unfortunate occurrence may have important legal significance.*

Finely powdered carbon particularly if it is distributed in macerated tissues covered with grime and clotted blood, is practically indistinguishable. Its presence is rendered still more obscure if the tissues have been stained as they usually are by the early application of such antiseptics as *iodine* or *mercurochrome*.

On several occasions the author has been called upon to remove tattoo marks

from the face and nose that were caused by the inclusion of carbon dust in the scars following automobile injury. In most of these cases during the emergency treatment immediately following the accident when *iodine* or *mercurochrome* had been applied, the foreign material was so concealed that the surgeon who was subsequently called in found it is practically impossible to detect carbon dust under such conditions. It is well, therefore, always to inquire into the circumstances of the accident, and to ascertain especially if there is a history of contact with the road bed. Then, by careful investigation of the wound, it must be concluded that it contains no carbon before the final adjustment and suturing of the skin is done.

It may be well to mention that when an automobile injury has resulted in a punctured wound or where the tissues are contused, macerated and badly soiled the risk of tetanus is greatly emphasized. This potential danger should be recognized by the man who sees the case first. Not only should he open up thoroughly and explore all punctured wounds and remove badly injured and necrotic tissue but he should administer antitetanus serum as soon as possible. 1,500 units should be introduced hypodermically just beyond the edges of the wound. This dose should be repeated in ten days as this serum quickly loses its defensive qualities.

It is better to divide the amount to be given into four equal doses and to inject them at half-hour intervals, provided that in the meantime no untoward symptoms caused by horse serum sensitization, present themselves.

Carbon dust when it is included in the tissues has a tendency to work towards the edges of the wound after suture. Perhaps the physical nature of the material accounts for this. The following experiment may serve to explain the phenomenon.

It has been noted that when a sample

of the black, impalpable dust (composed largely of carbon) which accumulates under our office windows, which has been expelled from the exhaust pipes of passing automobiles, is placed in a vessel containing water, the water soon becomes covered with an oily film. This analogy not only apparently indicates the carbon origin but illustrates as well the tendency of the carbon to work towards the surface of the wound and the tendency to discoloration that becomes so prominent in the scar after healing—which, during the several months following, has an inclination to increase rather than to diminish.

Remedy

Plastic surgery affords the only satisfactory method for the removal of the tattoo mark caused by the presence in the tissues of carbon, for it is never absorbed or disposed of by the circulation.

Each case of tattooing is a problem in itself. The location, the extent of the discoloration, its depth below the surface of the skin, the age and physical condition of the patient are the principal factors. Their relative importance must carefully be determined by the surgeon at the time of the operation.

Deeply abraded and macerated skin surfaces of considerable extent sometimes demand the removal of an area of affected skin sufficient in extent to require the use of a pedicled flap or skin-grafts removed from some other part of the body. This is true where, in the process of healing, there have been left islets of normal skin surrounded by scar-tissue, in which the fine particles of carbon are imbedded.

If the marks are scattered, but fairly dense, it is not advisable to make multiple incisions in an attempt to remove each mark of discoloration separately, for the sum total of the skin removed would be great; hence the linear scars resulting from the numerous incisions would hinder a satisfactory result. Under such circumstances it is better to remove the entire tattooed area, which if it be extensive may be done by minor interval grafting operations extending over a period of time. Excellent results may be secured by this method. In some instances by carefully undermining the adjacent skin and by using well-placed

relaxation sutures, large areas of tattooed skin may be removed and the raw surfaces covered without the use of either grafts or flaps.

By making incisions parallel with the natural wrinkles and undermining the skin in the directions where relaxation is considered necessary, it is surprising how large an area may be covered by the adjacent skin. It is, of course, necessary to support the edges of the wound during the process of healing and for some time afterwards, but the normal elasticity of the skin will soon compensate for the loss of tissue, provided that it is not subjected to too much traction.

The value of the pedicle-flap and the tube-flap, after the removal of scars covering a wide area, is unquestioned, but it is doubtful if this expedient will ever be considered necessary in the treatment of tattoo marks unaccompanied by other conditions needing correction.

It is advisable to know the depth of the coloring matter below the surface of the skin and whether it extends into the subcutaneous tissues, which it may readily do along the lines of the scar-tissue if the original wound was a deep one.

The practical necessity of this knowledge prior to making the first incision lies in the fact that the extent of the tattoo mark is much more difficult to see after the field is besmeared with blood. Moreover, if any carbon remains it will work towards the surface and show along the edges of the wound. In that event no matter how skillful the wound may have been closed, the result will not be satisfactory.

If it is difficult to ascertain the exact distribution of the coloring matter, it is better to incise deeply and to remove an excessive rather than an insufficient amount of tissue.

The author has found that a good way to estimate the extent and distribution of an accidental tattoo mark is to press with the finger firmly over the discolored area until the tissues are blanched, then release the pressure suddenly. Observation of the appearance of the blanched skin just at the moment when the capillary circulation is being re-established will give a fairly accurate idea of the depth below the surface of the skin of the most superficial portion of the coloring matter. This

test, however, does not indicate the limit of extension into the tissues if the wound was deep. The method of determination used by the author is to pinch the skin involved between the thumb and the index-finger, elevating it slightly and rolling it between the fingers. Involvement of the subcutaneous tissues is indicated by a hard, cord-like band extending into them. This is a certain indication that the wound was deep and that the entire scar must be removed, otherwise a pencil mark is likely to indicate the line of the incision after healing has occurred.

Comment

Unfortunately the foregoing tests are not applicable in those cases of tattooing that sometimes follow injuries to the nose, because of the histological structure of this organ. Here the accuracy of incision, including the entire tattoo mark is relied upon and the surgeons' skill in making the plastic repair of the defect remaining after the excision.

It is necessary to mention, only for the purpose of condemning, the acts of

those who would attempt to remove tattoo marks by means of escharotics, such as trichloroacetic acid and allied substances.

Conclusions

1. In the treatment of automobile injuries the possibility of tattoo should be kept in mind and meticulous care must be exercised in primarily removing all foreign matter from the wounds, particular attention being given to those cases where such discoloring antiseptics as iodine and mercurochrome have been used before the first attempt at plastic repair.

2. In those cases where there are deep abrasions, punctures or maceration of the tissues, 1,500 units of tetanus antitoxin should be administered in divided doses. This treatment should be repeated in ten days.

3. The removal of tattoo marks should be by excision; care should be taken to include all of the foreign matter and the principles of plastic surgery should be strictly observed.

140 EAST 54TH STREET

NEW CURE FOR STUBBORN WOUNDS RESULTS FROM CLUE GIVEN BY FLY

From a clue provided by an insect, entomologists of the U. S. Department of Agriculture have discovered a new way to heal stubborn wounds quickly, painlessly, and cheaply. The new treatment is the application of a solution of allantoin, a bland, odorless, harmless, and easily obtained product found in both insects and plants.

The insect that gave the clue to this discovery is one of the flies—in the maggot stage—that gained fame as a medical aid on World War battle fields, where an Army doctor found that wounds infested with maggots healed better and faster than wounds without them. Since then surgeons all over the world have used maggots in treating deep infections difficult to cure by ordinary surgery.

Government entomologists, who have developed methods for rearing and shipping sterile maggots to hospitals, have at the same time sought the secret of this maggot's power to heal. Dr. William Robinson, of the Bureau of Entomology and Plant Quarantine, now finds that allantoin, which is given off by the maggots as they work their way through a wound, is responsible

for part of this power. Allantoin, Dr. Robinson says, is not a new discovery. Dr. C. J. Macalister, who used it successfully 23 years ago for ulcers, reported that European peasants had long applied the roots of comfrey, which contain allantoin, to sores.

His recent tests, Dr. Robinson says, show that allantoin is particularly useful for non-healing wounds, such as chronic ulcers and extensive burns that refuse to mend. After a few treatments, pinkish granulation tissue begins to grow and soon the tissues are knitting together rapidly. A specially promising feature of the new treatment is that it can be made to control healing. Healing from the bottom up can be ensured in a deep wound by applying the allantoin solution in a small packing at the base of the wound and covering the sides with vaseline. General granulation can be promoted by filling the wound with gauze well saturated with the solution.

"Be kind to insects," says a writer. We never lose an opportunity of patting mosquitoes on the back.—*The Humorist* (London).

NONSPECIFIC ULCERATIVE COLITIS, TERMINAL (DISTAL) ILEITIS, AND BACILLARY DYSENTERY

Their Common Pathogenesis

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The author's purpose in the present article is to summarize the evidence which he has accumulated in support of the contention that bacillary dysentery, distal ileitis and nonspecific ulcerative colitis are merely different stages or manifestations of the same disease.

Acute Bacillary Dysentery

Acute bacillary dysentery may be exhibited in many bizarre forms. Attention is called to five atypical clinical types encountered in two recent outbreaks:^{1,2}

(1) Asymptomatic type. These cases are recognized only in the course of epidemiologic surveys. The individuals involved are not carriers. There is only a slight pyrexia of approximately 99°F.

(2) Constipated type. Upon careful inquiry a history of a single loose bowel movement generally attributed to dietary indiscretion may be disclosed. Most often, however, this escapes the patient's notice entirely and there supervenes a period of obstinate constipation lasting from three days to a week in a patient who ordinarily has one or two formed bowel movements daily.

(3) Appendicular type.³ The patients exhibit pain and tenderness in the right lower quadrant and there may be vomiting. A mass may be noted in the ileocecal region. Spastic ileum or sigmoid can often be felt through a thin abdominal wall. The pyrexia is generally mild (99°F. to 101°F.); the leukocyte count is normal or below normal with a corresponding Schilling picture. Laparotomy reveals a normal appendix but a rather mystifying extensive acute mesenteric lymphadenitis. Besides this, in nearly all of our cases, there was an acute, segmental inflammation of the terminal ileum and enlargement of the nodes at the ileocecal angle, both of which are responsible for the mass felt before operation. Depending upon the duration of the infection, a history of diarrhea and contact infection may be

obtained upon admission, or the diarrhea may commence on the day following operation.

(4) Neurotropic type. Patients in this group are admitted exhibiting all of the typical clinical signs of acute meningitis but lumbar puncture reveals a clear spinal fluid with normal cytology and glucose, no globulin, and negative culture. An accompanying nasal or labial herpes is always noted, which is believed to be due to a virus which accompanies the dysentery organism or neurotropic toxin.

(5) Unusual features in Sonne-Duval dysentery. In this type which is often encountered in intramural hospital outbreaks, groups of children afflicted with the mild form of the disease may exhibit no other noteworthy symptom than bloody diarrhea. The patients are very comfortable, do not appear acutely ill and the disease clears up in approximately one week. Unless the cases are carefully studied the correct diagnosis may not be made. The appendicular type of Sonne-Duval dysentery with mesenteric adenitis is often ushered in by an upper respiratory infection.

In acute bacillary dysentery the following diagnostic triad must be emphasized:

(1) Fecal or sigmoidoscopic culture. Generally positive only during the first seven to ten days.

(2) Diagnostic bacteriophage. Begins to rise as the culture becomes negative.

(3) Agglutination titre. Begins to rise as the culture becomes negative. Repeated studies for culture, phage, and agglutination titre are stressed.

At least six examinations of each on alternate days should be made before the diagnosis of bacillary dysentery is discarded. Attention is also drawn to the fact that while a titre of 1:100 is diagnostic of the Shiga, Flexner Y, Mount Desert, and Park-Hiss types, only 1:40 or 1:50 is required for the Sonne-Duval strain. These observations in connection

with acute bacillary dysentery may prove useful in the investigation of recent outbreaks of food poisoning in New York, New Jersey, and Massachusetts, particularly since the incubation period in atypical Flexner and Sonne Duval dysentery is often only a matter of hours rather than days.

Distal Ileitis⁴

Acute inflammation of the terminal ileum has been described under acute bacillary dysentery. The portion of the intestine involved is red, edematous, and thickened and clearly demarcated from contiguous healthy tissue. There is an accompanying diffuse mesenteric adenitis in which the nodes are greatly enlarged, pink, and succulent. In most cases the acute ileitis appears to subside but some have been noted in whom the condition persists and goes on to the chronic nonspecific stage with fibrosis and narrowing of the bowel lumen.

Nonspecific Ulcerative Colitis

Nonspecific ulcerative colitis is the chronic stage of bacillary dysentery. The specific dysentery organism has died out in most cases and secondary invasion has occurred, usually with the enterococcus and *B. coli*. This takes place through the serpiginous mucosal ulcerations which have originally been produced by the *B. dysenteriae* toxin during the process of excretion from the blood through the bowel wall into the lumen.

The author has found it impossible to infect laboratory animals by oral feeding of live cultures, an observation previously made by other investigators. Intestinal lesions have, however, been easily produced in the rabbit by inoculation of an eighteen-hour broth culture into the ear vein, with recovery of the organism from the feces in approximately twenty-four hours.

The development of nonspecific ulcerative colitis may be divided into three stages.

(1) Stage of acute bacillary dysentery. Any case of acute bacillary dysentery which lasts for more than three weeks is considered a suitable one for the development of nonspecific ulcerative colitis. This opinion is based upon the author's follow-up studies of the acute cases.

(2) Stage of chronic bacillary dysentery with discrete focal lymphoid necroses or geographic denudations of the mucosa.

(3) Stage of nonspecific ulcerative colitis which blends imperceptibly with Stage 2 and is characterized by its long duration (one to ten years or more) and dense mural fibrosis in the healing stage with or without intramural abscess formation.

In tracing back our cases of nonspecific ulcerative colitis we succeeded in obtaining positive agglutination titres against *B. dysenteriae* in all thus far investigated (31 cases).⁵ We have also obtained diagnostic bacteriophage in some and epidemiologic studies have revealed contact infection during the acute stage. We have referred to three cases in one family, two proven by sigmoidoscopic and laboratory studies, the third person refusing examination. Likewise, we have described three cases in another family, proven as above, of twelve, eight, and five years' duration, with a history of chronic colitis in six others, one of whom had died of intestinal hemorrhage.

In the control studies⁶ of 300 serums from individuals without any history or clinical evidence of bacillary dysentery, there were found diagnostic agglutination titres of 1:100 in 4.6 per cent of the cases. This indicates the strong probability of a previous dysentery infection and the widespread prevalence of the disease in the New York City area. Moreover, our nonspecific ulcerative colitis cases all came from regions in which bacillary dysentery is endemic (New York City, Jersey City, Baltimore, Chicago, New Orleans, Rochester).

Treatment of Nonspecific Ulcerative Colitis^{7, 8}

(1) Stage of acute bacillary dysentery. Supportive and symptomatic, daily administration of castor oil, intravenous of 5 per cent glucose in normal saline or transfusion for dehydration and hemorrhage where indicated. High titre dysentery antitoxin during the first few days.

(2) Chronic stage. Intestinal oxygenation, D.C. (dysentery colitis) serum, D.C. vaccine, high vitamin high caloric but well balanced diet. Limitations based on low residue have little influence on the course of the disease.

Oxygenation appears to act by inhibiting the growth of toxic anaerobic spore bearers, by exerting a soothing influence on spastic bowel and by preventing the development or facilitating the discharge

of intramural abscesses. The use of high titre D-C serum and vaccine is based upon our experience with primary and secondary invaders in nonspecific ulcerative colitis.

667 MADISON AVENUE

References

1. Felsen, J., and Osofsky, A. G.: Sonne Dysentery, *J.A.M.A.* 103:966, 1934.
2. Felsen, J., Rundlett, E. V., Sullivan, J., and Gorenberg, H.: Atypical Flexner Dysentery. A Preliminary Report of the Jersey City Epidemic, *J.A.M.A.* 103:1055, 1934.
3. Felsen, J.: The Appendicular Form of Bacillary Dysentery (with case reports on acute distal ileitis). (Accepted for publication, *Am. J. Dis. Child.*)
4. Felsen, J.: Clinical Notes Concerning Distal Ileitis as a Manifestation of Bacillary Dysentery, *Am. J. Digest. Dis. and Nut.* 1:782, 1935.
5. Felsen, J.: Nonspecific Ulcerative Colitis

- as a Late Manifestation of Bacillary Dysentery. (Submitted for publication.)
6. Felsen, J., and Osofsky, A. G.: Control Agglutination Studies Against B. Dysenteriae on the Serums of 300 Individuals in the New York City Area. (Submitted for publication.)
7. Felsen, J.: Intestinal Oxygenation in Idiopathic Ulcerative Colitis, *Arch. Int. Med.* 48:786, 1931.
8. Felsen, J.: Cases of Intestinal Ulceration, with a Special Reference to Amoebic Dysentery, *Am. J. Digest. Dis. and Nut.* 1:297, 1934.
9. Lynch, J. M., and Felsen, J.: Nonspecific Ulcerative Colitis, *Arch. Int. Med.* 35: 433, 1925.

TRACKING DOWN THE SECRETS OF NUTRITION

To find out just what it is in our food that feeds us, and what does not, may be supremely important for patients able to take little or no food in ordinary ways. Nourishment given intravenously, for instance, must be all essential, with no non-essentials, as far as possible. New light was cast on this vital problem at the recent Detroit meeting of the Federation of the American Societies for Experimental Biology, as reported in the *New York Times*.

The discovery, isolation in pure form and the artificial preparation of a new, hitherto unknown essential element in the food without which life could not thrive was reported before the meeting by Dr. William C. Rose, Professor of Physiological Chemistry at the University of Illinois.

Collaborating with him were Dr. H. E. Cartel, Richard H. McCoy, and Miss Madelyn Womack of the physiological chemistry staff of the university.

The new food element is what is known as an amino-acid, the building stones out of which the complex foodstuffs called proteins are composed. This brings to twenty-two the list of known amino acids in the proteins of the body, of which eight have been shown to be necessary to life.

As a result of this discovery, Dr. Rose reported, it has been possible to feed animals on a mixture of amino acids, without any proteins together with the other components of a diet, and have them thrive and grow. "The first time on record that animals, both of which, on mixtures of highly purified amino acids, felt before the place of proteins," he stated. "The duration of life is known scientifically as diarrhoea and colitis. Hydroxybutyric Acid.

Proteins taken into the body in such foods as milk, meat and eggs carry the only type of nitrogen available to the use of the body.

These proteins are changed, through the digestive processes, into amino acids and the nitrogen fixed in these acids is absorbed by the body, making life possible.

About five years ago, in attempting to learn which of the amino acids were essential to life, Dr. Rose and his associates fed animals a mixture of foods containing no protein, but to which had been added all the twenty-one of the then known amino acids. The animals, however, declined rapidly in weight and eventually died.

This was interpreted as indicating the presence in proteins of a hitherto unknown component which was essential to life. A subsequent search for the mysterious substance resulted in the recent isolation of the twenty-second amino acid.

"The discovery will make it possible to determine which of the twenty-two amino acids present in proteins are necessary for life and which are non-essential," Dr. Rose said.

"By the use of a diet carrying all, the amino acids may be dropped out one at a time, and the effect of each upon growth accurately determined.

"The results may prove to be of clinical value also, inasmuch as it may be possible to administer the essential amino acids intravenously to patients who are unable to consume food in the normal fashion, because of stomach ulcers or other illness. Experiments along this line are now being conducted."

A cold is sometimes affirmative and sometimes negative. Sometimes the eyes have it, and sometimes the nose.—*Medical Record*.

THE DISTRIBUTION AND DIAGNOSTIC SIGNIFICANCE OF LEAD IN THE HUMAN BODY

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Human progress is measured largely by achievement in producing larger and better mechanical devices. This achievement sometimes is measured in terms of increasing longevity of man. It has been pointed out in many ways that the daily struggle of the human being consists in overcoming mechanical, physical, and biological difficulties. It often occurs that in the effort to surmount the first two obstacles little consideration is directed toward the accomplishment of the last. It has been aptly stated that the great war which is to come must be fought between man, bacteria, and insects of one character or another. The alertness of man in overcoming the great hordes of insects which attempt to destroy the sources of our food supply sometimes includes the toxic action of the substances used in producing this retreat of insect life. Furthermore, our environment has led us to consider means of producing things which attract our visual desires. Our ancestors lived in an environment free from the many contaminating influences which now present themselves in our daily life. Early man drank from the streams near his abode and ate the food which nature provided. Sometimes famine and pestilence overtook him and precipitously the conflict was ended.

At present our artificial mode of living presents many difficulties which sooner or later lead to symptoms that are obscure in their etiology. During the last decade our investigations have been directed toward a somewhat clearer understanding or solution of these symptom complexes. In the course of our studies our attention has often been focused on the metals used for therapeutic purposes. Occasionally, treatments were accompanied by some undesirable manifestations, and through a study of these "by effects" the action of metals attracted our interest. In previous articles the subject of arsenic has been

discussed. At present, sufficient data has been collected on the effect of lead to warrant further consideration.

In order to appreciate the pathological effects of lead, it is important to give some consideration to the common sources of contamination or exposure. In our minds, usually, lead is associated with acute and chronic poisoning, as seen from an industrial point of view. However, a more important and insidious poisoning has presented itself.

It is not uncommon that drinking water conducted through several hundred feet or even many miles of lead pipe may be contaminated by solution of the lead. Our foods, cooking utensils, and even drugs used in the treatment of disease may be a common source of metallic intoxication. Articles dealing with industrial poisoning offer much information in regard to the source of these metals, but the presence of small amounts of lead have been little considered in relation to general health.

In a previous article¹ on spray residue the presence of lead in a great variety of foods was discussed. Considering our daily dietary, it is readily seen that the total ingestion of metal may be extremely large when the additive amounts from various sources are considered.

The consideration of the cumulative effects of infinitesimal doses of lead should encourage us to analyze the many sources which might be associated with this continuous intake. When a strange lethargy creeps over the patient, when a peculiar blood picture develops, when a weariness of flesh and brain settles over the individual like a strange cloud, it is high time, perhaps too late, for the clinician to delve into the causative factors concerned in the particular syndrome. The patient prefers to sit by the fire, all is trouble, the flesh and the brain are weary, his aspect of life is gloomy and

taciturn, he is silent and apathetic, and his faculties are sluggish. Constipation and abdominal discomfort come over him. In neurotic females emotional outbursts may interrupt the melancholy. Various other symptoms may break the monotony of an otherwise normal functional activity. The metals interrupt the metabolic processes, and the patient drifts into the channels where the diagnosis is difficult or even obscure. In this respect, it is our intention to show that this insidious form of plumbism should not be diagnosed by symptoms alone, but on the other hand the suspicions should be verified by means of laboratory examination of blood, hair, and urine. Too often the patient is dosed with thyroid in order to restore his loss of energy and mental activity only to sink back into a saturnine condition. The far-reaching effects of this insidious form of plumbism are manifest in the predisposition to other types of disease. It has been shown that individuals suffering with metallic poisoning of the "sub-chronic" type are far more susceptible to other attacks.

Recently, Wirtschafter² has shown that a relationship exists between lead poisoning and hypertension. In addition to this report, Allbutt and Gibson,³ Harris,⁴ and Feil and Balsac,⁵ found hypertension present in workers suffering with chronic lead intoxication. Furthermore, the incidence of arteriosclerosis is relatively high among persons showing a high lead content.

Lewis⁶ has called attention to the unusual number of lead cases suffering from gastric and intestinal ulcers. These ulcers were verified by x-ray photographs. Necropsy was performed on three of the perforated type, and lead was demonstrated in the liver, brain, and kidney. Many investigators regard the ulcers in these cases as associated with a toxic vagotonia.

The Workmen's Compensation Act covers lead poisoning but makes no provision for lead absorption. This brings up an interesting medicolegal point. Lead is eliminated by the liver via the alimentary canal, and consequently the duodenum is more exposed than the rest of the intestine to the deleterious action of toxic material.

McJunkin⁷ found necrosis of the gas-

tric epithelium in animals, whereas Jores⁸ experimentally produced gastric and intestinal ulcers by lead. Reference to these findings is made, and is of particular interest in relation to our observations on one thousand cancer patients who will be discussed in a succeeding communication.

Peipers⁹ points out that there is a circulatory disturbance, and a disturbance in the balance of the peptinizing capacity of the gastric juice and the autopeptic defense of the gastric wall or the blood. The pathological anatomic findings of muscular hypertrophy, thickening of the connective tissue of the vessel sheaths, and obliterating processes, furnish a sufficient morphological basis for the assumption that circulatory disturbances are of significance in the pathogenesis of ulcers in victims of lead poisoning. Objection may be offered that the two are accidental, but chronic lead poisoning might produce conditions of this character in an individual in whom no dysharmony of the vegetative system existed.

Sex is believed to play a very important part in susceptibility. The female is alleged to be more susceptible than the male, and the greatest liability is between the ages of 15 and 25. Women suffer more from lead convulsions and blindness, while men suffer more from colic and palsy.

Common Sources

In our present day environment, and our present methods of adapting ourselves, the means of intake are almost innumerable. Glazed and enamelled ware are very generally used, and it has been reported¹⁰ that the cheaper wares in particular are a common source of lead intake. Ordinary cans may be coated with lead in place of tin, thus exposing the contents to contamination. The painter's trade, as should be expected, is a very good source of material for study. The rubber factories, the printing trade, the automobile industry where automobile bodies are sandpapered, the water supply in various cities are all common sources of contamination.

In hardening steel wires a lead bath is used, and this furnishes a very common source of contamination. In "tinning" metal containers the tin is very frequently

mixed with lead which is attacked by fluids and other substances placed in the containers. More recently, many short cuts have been employed in producing cheap metal containers, and in many instances lead alone has been used in coating the sheet iron. In rubber factories lead is used as an accelerator in the vulcanizing process and also in molds. Some kinds of silk thread are weighted with lead, and this has caused poisoning in individuals who developed the habit of chewing the thread. The use of chrome yellow in place of eggs in various confectionaries and cakes has been the cause of poisoning. In contrast to the well known beer cases in 1900,¹¹ a recent outbreak of lead poisoning was reported in 1922.¹² It was discovered that the beer was stored in large iron tanks lined with white enamel. The lead glaze was slowly dissolved by the plumbo solvent properties of the beer.

Bech¹³ reported a serious case of poisoning which was traced to the lead foil in which the snuff was packed.

Fukushuna and Matsumoto¹⁴ reported infantile lead poisoning in 298 babies which was caused by the use of white face powder by the nursing mothers. The mortality was 72 per cent. Haagen¹⁵ relates a case in which lead poisoning was definitely traced to a gun shot wound sustained in 1904. Knowlton¹⁶ reported poisoning following the use of wines and cider, and stated that the case was interesting on account of the relatively small amount of lead necessary to produce symptoms.

During the course of our investigations an interesting case developed in a small boy who ate the paint from his toys and kiddy coop.

Williams, et al.¹⁷ reported several cases of poisoning due to the burning of wood saturated with lead compounds. This poisoning was noted particularly in the Baltimore district where the wood, which is used in the storage battery industry, had been given to the poorer class of people for fuel. The authors stated that this was caused by the recent economic distress. Junk dealers had allowed indigent persons to secure the casings of discarded storage batteries after the lead plates had been removed. Considerable deposits of lead salts were found in the

wood. Reports from Philadelphia, Long Island, and Detroit indicate that the same conditions may exist in other parts of the country. As should be expected, this is a dangerous fuel, and public health measures have been carried out in order to avoid this source of poisoning.

Wilcox and Caffey¹⁸ reported lead poisoning as occasionally seen in infants and children from the prolonged use of lead nipple shields. Ruddock¹⁹ noted that a true perversion of appetite—so called pica—appears to develop in some children. Froboese²⁰ found that certain toothpastes absorbed lead from the tinned lead tubes, the amounts of lead ranging from 0.5 to 357 milligrams per 100 grams of paste. Winge²¹ observed a rather unusual type of slow poisoning in a patient who had been employed as a scorekeeper in a poorly ventilated rifle gallery where lead dust was raised by the bullets striking the target.

Mladenoff²² reported an outbreak of lead poisoning at Vidin in Bulgaria during 1923 which terminated when its origin was detected five months later. By this time there had been 314 cases with 13 deaths in 153 families. Several other deaths occurred among those poisoned as a result of other disorders believed to have been brought on, or at least, accentuated by the lead absorbed. The source of the poisoning was found to be adulterated red pepper. Red pepper is very much used in Hungary and Bulgaria, and is often adulterated with such things as flour, iron filings, and brick dust, but in this particular instance the presence of 20.5 per cent red lead and 4.1 per cent of sand were found. Analysis showed that each teaspoonful contained about 3 grams of red lead.

In regard to the presence of lead as a public health problem, it is only necessary to refer to the difficulties in the recent Boston lead problem.²³ It was shown by analysis that the water, in connection with the poisoning of one child, which stood in the lead pipe leading from the street to the house, contained 0.0657 parts of lead per 100,000 of standing water, while the running water showed the presence of 0.0314 parts. Other analyses indicated that the amount might increase even to 0.1114 parts per 100,000. The danger of the use of lead pipes

that practically all people show the presence of some lead in the bones. In adolescents 0.020 to 0.65 mgms. were found in 3 gms. of ash. The amount increased in old age. These authors, likewise, claim that the blood analysis for lead is more accurate than for urine.

Barth³² examined the lead content of the bones of 30 adults who had never worked in lead industries or suffered "supposedly" from lead poisoning, and in 10 infants from one day to four months old. He found that with increasing age the amount of lead in the bones increased. Amounts ranged from 0.01 to 0.19 mgms. per 3 gms. of bone.

During the past 100 years lead studies have usually been discussed from the point of view of occupational and industrial hazards. There is no question but that this work has served a very useful purpose. However, there is an infinitely larger group of people who are suffering with metal poisoning of the type not described previous to our investigations of "sub-chronic" metal poisoning.

One of the most distressing situations associated with lead poisoning was observed by one of us (M.) during the examination of patients poisoned by lead tetra ethyl at the Reconstruction Hospital.

The investigations of Kehoe, et al.³³ showed that examinations of soil and drinking water among the Mexicans contained very significant amounts of lead. Futhermore, in all instances, the vegetation used as food material contained lead. Likewise, there was a significant amount of lead in the animal products and prepared food materials used by these subjects. The authors have shown that the presence of lead in food material is a major factor in the production of high lead values in individuals alleged to be normal. They have also shown that persons who absorbed abnormal amounts of lead excrete lead at a higher rate than those having a small intake. A rather extensive study of the tissues of human beings has been carried out and is extremely valuable for future consideration in regard to the lead symptoms which may appear many years after the initial intake.

At the present time our investigations have been completed on the lead intake in its relation to the central nervous system. These results will appear shortly

as a separate communication explaining some of the neurological symptoms found in the daily practice of clinicians dealing with diseases of the nervous system.

McKhann and Vogt³⁴ have shown rather definitely the incidence of lead poisoning in infants as illustrated in Table I.

TABLE I
Age Incidence of Lead Poisoning in Infants' and Children's Hospitals, Boston, 1921-1933

Age	No. Cases
Under 1 year.....	7
1 to 2 years.....	38
2 to 3 years.....	34
3 to 4 years.....	3
4 to 5 years.....	4
Over 5 years.....	3
Total	89

Roentgenologic diagnosis of lead poisoning in infants and children has been pointed out by Vogt.³⁵

Winkelman and Eckel³⁶ have shown that intoxication with lead produces a group of cerebral symptoms known collectively under the term "lead encephalopathy." They have pointed out that the mechanism of lead on the central nervous system is not well understood at the present time. They classify their symptoms as convulsions and mental. As a result of their studies they have discussed lead poisoning under the heading of changes in the blood vessels and changes in the ganglion cells. They believe that lead hastens arteriosclerotic changes and that the small vessels appear to bear the brunt of the attack. The cells lining these blood vessels are noticeably more prominent, swollen, pycnotic, and lateral budding results in new vessel formation. In regard to the ganglion cells, they find evidence of focal anoxemia. Lipoid accumulation is present, and they believe that most of these changes may be explained on the basis of direct toxic action. They further state that lead poisoning behaves in the same manner as any other toxin in producing endarteritis. It is believed that in lead poisoning the brain is concerned in a fairly generalized involvement of the small blood vessels and that, furthermore, an accumulation of fluid between the muscle bundles in the media and consequent coagulation takes

mixed with lead which is attacked by fluids and other substances placed in the containers. More recently, many short cuts have been employed in producing cheap metal containers, and in many instances lead alone has been used in coating the sheet iron. In rubber factories lead is used as an accelerator in the vulcanizing process and also in molds. Some kinds of silk thread are weighted with lead, and this has caused poisoning in individuals who developed the habit of chewing the thread. The use of chrome yellow in place of eggs in various confectionaries and cakes has been the cause of poisoning. In contrast to the well known beer cases in 1900,¹¹ a recent outbreak of lead poisoning was reported in 1922.¹² It was discovered that the beer was stored in large iron tanks lined with white enamel. The lead glaze was slowly dissolved by the plumbo-solvent properties of the beer.

Bech¹³ reported a serious case of poisoning which was traced to the lead foil in which the snuff was packed.

Fukushuna and Matsumoto¹⁴ reported infantile lead poisoning in 298 babies which was caused by the use of white face powder by the nursing mothers. The mortality was 72 per cent. Haagen¹⁵ relates a case in which lead poisoning was definitely traced to a gun shot wound sustained in 1904. Knowlton¹⁶ reported poisoning following the use of wines and cider, and stated that the case was interesting on account of the relatively small amount of lead necessary to produce symptoms.

During the course of our investigations an interesting case developed in a small boy who ate the paint from his toys and kiddy-coop.

Williams, et al.¹⁷ reported several cases of poisoning due to the burning of wood saturated with lead compounds. This poisoning was noted particularly in the Baltimore district where the wood, which is used in the storage battery industry, had been given to the poorer class of people for fuel. The authors stated that this was caused by the recent economic distress. Junk dealers had allowed indigent persons to secure the casings of discarded storage batteries after the lead plates had been removed. Considerable deposits of lead salts were found in the

wood. Reports from Philadelphia, Long Island, and Detroit indicate that the same conditions may exist in other parts of the country. As should be expected, this is a dangerous fuel, and public health measures have been carried out in order to avoid this source of poisoning.

Wilcox and Caffey¹⁸ reported lead poisoning as occasionally seen in infants and children from the prolonged use of lead nipple shields. Ruddock¹⁹ noted that a true perversion of appetite—so-called pica—appears to develop in some children. Froboese²⁰ found that certain toothpastes absorbed lead from the tinned lead tubes, the amounts of lead ranging from 0.5 to 357 milligrams per 100 grams of paste. Winge²¹ observed a rather unusual type of slow poisoning in a patient who had been employed as a scorekeeper in a poorly ventilated rifle gallery where lead dust was raised by the bullets striking the target.

Mladenoff²² reported an outbreak of lead poisoning at Vidin in Bulgaria during 1923 which terminated when its origin was detected five months later. By this time there had been 314 cases with 13 deaths in 153 families. Several other deaths occurred among those poisoned as a result of other disorders believed to have been brought on, or at least, accentuated by the lead absorbed. The source of the poisoning was found to be adulterated red pepper. Red pepper is very much used in Hungary and Bulgaria, and is often adulterated with such things as flour, iron filings, and brick dust, but in this particular instance the presence of 20.5 per cent red lead and 4.1 per cent of sand were found. Analysis showed that each teaspoonful contained about 3 grains of red lead.

In regard to the presence of lead as a public health problem, it is only necessary to refer to the difficulties in the recent Boston lead problem.²³ It was shown by analysis that the water, in connection with the poisoning of one child, which stood in the lead pipe leading from the street to the house, contained 0.0657 parts of lead per 100,000 of standing water, while the running water showed the presence of 0.0314 parts. Other analyses indicated that the amount might increase even to 0.1114 parts per 100,000. The danger of the use of lead pipes

taciturn, he is silent and apathetic, and his faculties are sluggish. Constipation and abdominal discomfort come over him. In neurotic females emotional outbursts may interrupt the melancholy. Various other symptoms may break the monotony of an otherwise normal functional activity. The metals interrupt the metabolic processes, and the patient drifts into the channels where the diagnosis is difficult or even obscure. In this respect, it is our intention to show that this insidious form of plumbism should not be diagnosed by symptoms alone, but on the other hand the suspicions should be verified by means of laboratory examination of blood, hair, and urine. Too often the patient is dosed with thyroid in order to restore his loss of energy and mental activity only to sink back into a saturnine condition. The far-reaching effects of this insidious form of plumbism are manifest in the predisposition to other types of disease. It has been shown that individuals suffering with metallic poisoning of the "sub-chronic" type are far more susceptible to other attacks.

Recently, Wirtschafter² has shown that a relationship exists between lead poisoning and hypertension. In addition to this report, Allbutt and Gibson,³ Harris,⁴ and Feil and Balsac,⁵ found hypertension present in workers suffering with chronic lead intoxication. Furthermore, the incidence of arteriosclerosis is relatively high among persons showing a high lead content.

Lewis⁶ has called attention to the unusual number of lead cases suffering from gastric and intestinal ulcers. These ulcers were verified by x-ray photographs. Necropsy was performed on three of the perforated type, and lead was demonstrated in the liver, brain, and kidney. Many investigators regard the ulcers in these cases as associated with a toxic vagotonia.

The Workmen's Compensation Act covers lead poisoning but makes no provision for lead absorption. This brings up an interesting medicolegal point. Lead is eliminated by the liver via the alimentary canal, and consequently the duodenum is more exposed than the rest of the intestine to the deleterious action of toxic material.

McJunkin⁷ found necrosis of the gas-

tric epithelium in animals, whereas Jores⁸ experimentally produced gastric and intestinal ulcers by lead. Reference to these findings is made, and is of particular interest in relation to our observations on one thousand cancer patients who will be discussed in a succeeding communication.

Peipers⁹ points out that there is a circulatory disturbance, and a disturbance in the balance of the peptinizing capacity of the gastric juice and the autopeptic defense of the gastric wall or the blood. The pathological anatomic findings of muscular hypertrophy, thickening of the connective tissue of the vessel sheaths, and obliterating processes, furnish a sufficient morphological basis for the assumption that circulatory disturbances are of significance in the pathogenesis of ulcers in victims of lead poisoning. Objection may be offered that the two are accidental, but chronic lead poisoning might produce conditions of this character in an individual in whom no dysharmony of the vegetative system existed.

Sex is believed to play a very important part in susceptibility. The female is alleged to be more susceptible than the male, and the greatest liability is between the ages of 15 and 25. Women suffer more from lead convulsions and blindness, while men suffer more from colic and palsy.

Common Sources

In our present day environment, and our present methods of adapting ourselves, the means of intake are almost innumerable. Glazed and enamelled ware are very generally used, and it has been reported¹⁰ that the cheaper wares in particular are a common source of lead intake. Ordinary cans may be coated with lead in place of tin, thus exposing the contents to contamination. The painter's trade, as should be expected, is a very good source of material for study. The rubber factories, the printing trade, the automobile industry where automobile bodies are sandpapered, the water supply in various cities are all common sources of contamination.

In hardening steel wires a lead bath is used, and this furnishes a very common source of contamination. In "tinning" metal containers the tin is very frequently

place The conception of these authors on the action of lead on the brain is that it occurs through blood vessel changes

Urine In the course of the investigations being reported at this time, 205 patients were picked at random and urine from these patients was examined for the lead content The maximum value found was 91 micromilligrams, and the minimum was zero The average was 0.033 mgs per liter Twenty showed some clinical abnormality which might account for their lead content lying in the 70 to 90 micromilligram range If these patients were eliminated the average would be 28 micromilligrams Table II shows representative cases selected from this entire group The values given above represent the entire group of patients and not the average of these found in the table below showing the general run of patients

Probably more than 2,000 patients have been studied in connection with the urinary examination of lead, but in the course of the clinical observations definite symptoms can be attributed to some type of metal poisoning or toxic reaction Even though our average has included some of the higher values, it is our opinion that the report by Weyrauch placing the normal amount as low as 0.020 mgms in 1,000 cc is sufficiently conservative It became necessary for us to include these individuals inasmuch as they represented the usual clinic patient and according to our views, even those possessing the higher amounts of metal will eventually exhibit some clinical disturbance Up to this time we have quite generally been concentrating our attention only on those patients who have shown a concentration of 0.050 mgms per liter

In the first place it is not easy to recognize patients suffering with incipient plumbism where the lead contaminated water is the source of the poisoning Some clinicians believe that many of the "rheumatic" cases which derive temporary benefits at various watering places and spas were due to the fact that the patients were ingesting water which was free from the small quantities of lead which are habitually present in the usual supply When lead absorption is the result of the ingestion or inhalation into the body of small quantities of lead, which are below the toxic minimum, symptoms may or may not be observed until after long intervals have elapsed The body under these circumstances is able to deal with and repair the damage which plumbism has done The increase and decrease of the solubility of lead, both outside and inside of the body, is determined largely by the presence of other substances Consequently, the acidity and CO_2 content of the body fluid would play an important part in the absorption and the excretion of lead compounds One of the most recent and comprehensive reports dealing with this subject has been published by Ingleson³⁷

Blood Patients included in the group where the blood has been examined, were individuals entirely different from those discussed in the group where urine was obtained These individuals were, again, selected at random but, in so far as possible were free from any major disturbances that could be accounted for as a factor in bringing them to the hospital clinic It is to be understood that if a patient showed any manifestations associated with our previous ideas of metal symptoms, they were not included in this

TABLE II

Milligrams of Lead in 1000 cc Urine So Called Normal Patients—Neurologic Type

0.0076	0.076	0.085	0.058	0.04	0.028	0.072	0.016
0.061	0.0	0.062	0.024	0.01	0.012	0.011	0.028
0.062	0.014	0.025	0.012	0.0	0.028	0.074	0.082
0.037	0.047	0.023	0.02	0.021	0.064	0.004	0.082
0.066	0.0	0.025	0.02	0.027	0.012	0.0	0.02
0.003	0.054	0.0	0.028	0.016	0.016	0.006	0.053
0.03	0.049	0.04	0.05	0.007	0.077	0.037	0.05
0.0	0.06	0.039	0.008	0.09	0.003	0.018	0.031
0.084	0.0	0.085	0.029	0.03	0.042	0.032	0.032
0.06	0.058	0.03	0.004	0.058	0.0	0.061	0.051
0.038	0.024	0.065	0.03	0.03	0.06	0.011	0.029
0.054	0.024	0.012	0.009	0.014	0.004	0.046	0.069

group. A total of 90 patients, divided into three parts, was used for this study: (1) females suffering with various types of skin diseases; (2) males with skin diseases; (3) a miscellaneous group. Examination of the patients in the female group showed that there was an average of 0.026 mgs. of lead per 100 c.c. of blood. It is our belief that even this value should be regarded as rather high. Fifty per cent of the patients showed a blood which was negative for lead. Inasmuch as there was this extremely high negative value it seemed rather a waste of space to attempt to tabulate a group of this character. There were four patients with values as high as 0.070, and four with values of 0.050. The same remarks made under discussion of "urine" is applicable to these patients. If one eliminates the eight cases with values of 0.070 and 0.050, the "so-called normal" value is reduced to 0.006, which probably is somewhat nearer the "normal value." In the second group, in which males were taken for the source of blood, it was found that 10 of the 25 cases, or 40 per cent, showed the absence of lead. The average for the entire group showed the presence of 0.024 mgms. of lead per 100 c.c. If one compares males and females, according to the studies which we have made on "alleged" normal individuals, it would appear that a higher amount of lead is found in males than in females. Ten of the group showed a value of 0.050 or more. In this group it was found that, in several instances, the patient's occupation might have been associated with the lead intake. In the miscellaneous group of 50 patients; the maximum values which were found were 0.024 to 0.017, which would give a value that is practically negative. In spite of the fact that a zero value is found, it is our belief that one should not regard this as a "normal value." If the average of all three groups is taken, and this represents 100 patients, it is found that 0.016 is obtained. This agrees fairly well with the values found by Weyrauch.

Hair. The presence of lead, as well as other metals, in the hair has received considerable attention. One hundred and twenty-two patients with various shades of hair, and with a great variety of diseases such as eczema, scabies, dermatitis, acne, urticaria, psoriasis, seborrhea,

and leukoderma, have been included in this group. The absence of lead was universal. This is in sharp contrast with the presence of arsenic in the hair of individuals suffering with a definite type of metal intoxication. It is our belief that when lead is found in the hair it is presumptive evidence that a lead intake has been present for a considerable period of time, or, that cosmetics or hair dyes had been employed to some extent. This can be easily ascertained by carefully examining the patient's history, and discussion with the patient. When lead is present in hair the amounts usually are of considerable magnitude, a condition which was reported in our paper on spray residue dangers. In other words, the hair represents a part of the human body which takes up lead rather slowly. These findings are in contrast with investigations previously reported before this section (1933) dealing with the diagnostic value of arsenic determinations of hair, skin, and urine.

Selection of Specimens

Physiologically, it is well known that arsenic behaves in a manner quite dissimilar to that of lead, consequently, the selection of specimens for arsenic analysis differs materially from that of value in the determination of lead. It has been pointed out by physiologists that lead has an unusual tendency to be deposited in the tissues high in phosphorous content. In contrast, arsenic is deposited in areas high in sulphur content. Previous investigations by one of us (M)²⁰ have shown that arsenic has a predilection for ectodermal tissues, hair and skin, and sulphur containing tissues such as liver, bone-marrow, and spleen. It is rather difficult at the outset to impress the internist and neurologist as to the importance of the selection of the proper material to be used as an aid in diagnosis. The physiologist quite naturally looks at the situation from the point of view of functional obstruction, whereas the internist and neurologist think primarily in terms of clinical dysfunction. The analogy is well illustrated by an observation in connection with the taking of blood for the determination of sugar, chloride, urea, and uric acid. Many clinicians feel that the specimen may stand around indefinitely

little realizing that chemical decomposition takes place. The same thing is true with urine examinations. Returning to the subject of arsenic and lead, it is quite apparent, from these analogies, that skin and hair are of the least importance insofar as the determination of incipient lead intoxication is concerned. It is unfortunate that this subject, new as it may be, is not approached from the point of view of obtaining the specimens that will give the best diagnostic interpretations; e.g., the skin may absorb lead internally and externally and this, of course, would have nothing to do with neurologic dysfunctions or metabolic disturbances.

It is true enough that the composition from day to day might show less variation than specimens of blood and urine. Experience has taught that the tissues and fluids which undergo the greatest metabolic change each day are the ones which suffer most from disturbing factors. In our previous investigations, a metal intoxication which has been shown with the continuous contact of the tissues with these foreign substances brings about the greatest clinical change. It has been further shown that it is the patient who retains these metals who suffers from the intoxication. Therefore, it is apparent that a blood examination is the most important analysis that can be carried out in connection with lead. The fact that large amounts may be found in the urine is presumptive evidence that large amounts have been present in the blood and other fluids of the body. A prominent clinician once raised the question as to why there was such a large daily variation in the lead content of the blood. Of course, careful thought had not been given to the physiology concerned. It would not be an unusual situation if on one day the blood contained no lead, and on some preceding day the value was extremely high; this should be expected, physiologically. The clinician, consequently, would not need to resort to the query as to the accuracies of the method. In our previous published articles these phenomena have been described as metal "tides" in which there is an "ebb" and "flow" of the metals in question. The tissues give up and deposit metals depending upon other physical and chemical factors. If the urine is properly collected

there is no possibility of lead being present except through the secretory and excretory process of the kidney. Of course, if it were impossible to secure blood and urine one might resort to hair and skin. It is hardly conceivable that the mental acuity of the patient would be of such a nature as to prefer to give a piece of skin in place of urine for chemical analysis of lead.

Discussion

At this time the presence of lead in blood, urine, and hair of approximately 500 cases, not known to be associated with lead exposure, is being reported. About 1,000 other cases have data associated with metal intoxication and these results will appear in a forthcoming study. It is our opinion that lead is a more insidious poisoning than arsenic, and that its removal from the human body is accompanied with more difficulty than arsenic. It is further our belief that arsenic and lead are closely associated, and that if any damage has been done by either one, other metals such as mercury, bismuth, nickel, or any of the other common metals, may play an important rôle in producing certain types of symptoms that have hitherto remained obscure.

At this time it is important to report findings on other substances and their relation to disturbed metabolism. As a result of a careful study of a very large group of human beings who have been patients in various hospitals and clinics, it is our opinion that the statements previously available indicating that lead in concentrations of 50 micromilligrams per 100 c.c. of blood, and 50 micromilligrams per liter of urine, are extremely conservative. As a result of our examinations, it will be seen that the values found by us in blood and urine more closely approximate 20 micromilligrams as the expected value in our location. It should definitely be pointed out that there are geographic differences in the amount present in individuals from various communities. The drinking water, the use of spray residue, and the amount of cosmetics applied by the families of a given community may alter the figures now published by us. For example, one might expect an unusually high number of patients showing larger amounts in the

Boston area where it has been alleged that the water supply is highly contaminated by lead. Our investigations, as one might expect, would have no data on a situation of this character, and in our report at this time reference has been made to the supply as appearing in various medical journals.

Emphasis should be made that one examination is not sufficient to definitely establish the presence of lead as a contamination factor, unless that value exceeds the so-called "normal" finding for a given community. If the result for a single examination indicates the presence of no lead, it should not be concluded that this result is final. After eliminative treatment of some character a second examination should be made. The data in our previous article on spray residue¹ showed that there is both a seasonal and geographic difference in the presence of lead in fruits and vegetables, and this should influence the amount of lead in human beings.

The ever prevailing question in regard to "sub-chronic" plumbism arises as in the case of all metals. No one has been in a position to show why one individual is susceptible and the other free from any disturbing influence. It is presumptive that the difference lies in the ability of one individual to excrete these metals more rapidly than another, or, any damage which may accompany this metal poisoning may be repaired more easily in one individual than in another. It is for this reason that an extensive study on metabolic disturbances has been in progress. It is our opinion that lead may be present in small quantities in a fairly large group of individuals in a given community and, furthermore, that when these amounts increase to a point that exceeds the minimum toxic limit, various symptoms hitherto obscure may be observed, and the causation to become clear.

The results of lead poisoning in cancer is an important point which will be discussed in a communication dealing with the subject of cancer only. It might be stated that cancer patients have shown an unusual predisposition to deposit lead in

the body, and also to influence certain physiological functions in an abnormal manner.

Summary

The investigation has pointed out various syndromes which may be associated with the "sub-chronic" type of lead poisoning. These symptoms are important for every individual as well as the clinician in that they may offer explanation for some of the human disturbances that occasionally arise. Common sources of poisoning such as our foods, drugs, and environment are discussed. One should always be on the alert for the possible presence of lead in drinking water, fruits, and vegetables. It is our belief that this discussion is of particular value in its relation to other diseases, among which cancer is prominent. People suffering with obscure, gastrointestinal, and cardiovascular disturbances should be examined with the greatest of care. Early symptoms that are of importance are loss of appetite, nausea, weariness, constipation, headaches, eye symptoms, and circulatory manifestations.

For the present, the laboratory investigator and clinician should certainly give attention to all values more than 50 micromilligrams per liter of urine. It is believed that in our locality 20 micromilligrams per liter is probably somewhere near the expected limit. In the examination of blood, it is believed that 24 micromilligrams of lead per 100 c.c. covers the patients of the "sub-chronic" type, and that 6 micromilligrams is probably a value somewhat nearer that which should be expected for this geographic location. In the case of hair, it appears that lead finds its way with a great deal of difficulty into the hair, and when lead is found it may be of diagnostic significance, depending upon the habits of the patient. Under our present mode of living, lead undoubtedly plays a part in many other diseases and should always be given consideration when the clinician is unable to place his finger immediately upon some definite syndrome.

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References

1. Myers, C. N., Throne, B., Gustafson, F., and Kingsbury, J.: Significance and Danger of Spray Residue, *Indust. Eng. Chem.* 25:624, 1923.

2. Wirtschafter, Zolton T.: Lead Poisoning by Diffuse Vascular Disease, *Ohio State Med. J.*, Dec. 1933.

3. Albutt and Gibson: (Quoted by Fishberg), Hypertension and Nephritis, Phila., Lea & Febiger, p. 494, 1931.
4. Harris, L. J.: A Clinical Study of the Frequency of Lead, Turpentine, and Benzene Poisoning in 400 Painters, *Arch. Int. Med.* 22:129, 1918.
5. Feil and Balsac: Diagnosis of Lead Poisoning, *Paris Med.* 47:466, 1923.
6. Lewis, David R.: Lead Poisoning as a Cause of Peptic Ulcer, *Brit. Med. J.*, No. 3708: 185, 1932.
7. McJunkin, F. A.: *J. Med. Research*, 32:171, 1915.
8. Jores, L.: *Beitr. Z. path. Anat. u. z. allg. Path.*, 31:183, 1902.
9. Peipers, Albrecht: *Deut. Mediz. Wochen.*, Feb. 17, 1933.
10. Editorial: Lead Glazes in Cooking Utensils, *Brit. Med. J.* No. 3346:322, 1925.
11. Reynolds: Account of the Epidemic Outbreak of Arsenical Poisoning Occurring in Beer Drinkers in the North of England and Midland Countries in 1900, *Med. Chirurgical Trans.* 84:424, 1901.
12. Editorial: An Outbreak of Lead Poisoning Due to Beer, *Lancet*, No. 5163:349, 1922.
13. Bech, A.: Serious Lead Poisoning Caused by Snuff, *Rev. Hyg. Med. Pref.* 55:541, 1933.
14. Fukushima, M., and Matsumoto, H.: Infantile Lead Poisoning, *Oriental J. of Dis. of Infants* 3:23, 1928.
15. Haagen, W. W.: Lead Poisoning from Retained Lead Missile, *Deut. Zeit. für Chirurgie* 215:39, 1929.
16. Knowlton, Millard: Lead Poisoning from Wine, *J.A.M.A.* 10:1892, 1928.
17. Williams, Huntington, Schultze, W. J., Rothchild, H. B., Brown, A. S., and Smith, F. R., Jr.: Lead Poisoning from the Burning of Battery Casing, *J.A.M.A.* 86:1514, 1924.
18. Wilcox, H. B.: Lead Poisoning in Nursing Infants: Report of Two Cases Due to the Use of Lead Nipple Shields, *J.A.M.A.*, 86:1514, 1924.
19. Ruddock, J. C.: Lead Poisoning in Children with Special Reference to Pica, *J.A.M.A.* 82:1682, 1924.
20. Froboese, V.: Absorption of Lead by Toothpastes from Tinned-Lead Tubes, *Z. Unters. Lebensm.* 65:176, 1933.
21. Winge, K.: Case of Slow Lead Poisoning with Peculiar Etiology, *Ugeskrift for Læger* 93:1154, 1931.
22. Mladenoff, D.: La Saturnisme alimentaire a Vidin (Bulgaria) en 1923, *Presse Medicale*, August 11, 1923.
23. Editorial: Boston's Lead Poison Problem, *New England J. of Med.* 209:559, 1933.
24. Editorial: Epidemic of Lead Poisoning from Drinking Water, *J.A.M.A.* 96:1422, 1931.
25. Porritt, Norman: Cumulative Effects of Infinitesimal Doses of Lead, *Brit. Med. J.*, July 18, 1931.
26. Myers, C. N.: Medicolegal Aspects of Chronic Metallic Poisoning, *Int. J. of Med. & Surg.*, July, Aug., Sept., Oct., Nov., and Dec., 1932.
27. McDonald, C. A.: Lead in Urine in Neurocirculatory Disturbances, *Boston Med. & Surg. J.* 183:543, 1920.
28. Bloomfield, J. J., Isbell, H. S. The Presence of Lead Dust and Fumes in the Air of Streets, Automobile Repair Shops, and Industrial Establishments of Large Cities, *J. Indust. Hyg.*, 15:No. 3, May, 1933.
29. Litzner, S., and Weyrauch, F.: Lead Content of Blood and Urine in Relation to the Appearance of Clinical Symptoms and Its Diagnostic Significance, *Arch. Gewerbepath. Gewerbhyg.* 4:74, 1932.
30. Litzner, S., and Weyrauch, F.: Bleivergiftung. Klinische Krankheitserscheinungen bei Bleivergiftung, *Die Tagliche Praxis*, May, 1933, p. 101.
31. Schmidt, P.: *Über die Diagnostik der Bleivergiftung im Lichte moderner Forschung*, Gustav Fischer, Jena, 1933.
32. Barth, E.: Investigations on the Lead Content of Human Bones, *Arch. Path. Anat. (Virchow's)* 281:146, 1931.
33. Kehoe, Robert, Thamann, Frederick, and Cholak, Jacob: On the Normal Absorption and Excretion of Lead. I. *J. Indus. Hyg.* 15:257, 1933.
34. McKhann, Charles F., and Vogt, Edward C.: Lead Poisoning in Children, *J.A.M.A.* 101: 1131, 1933.
35. Vogt, Edward C.: Roentgenologic Diagnosis of Lead Poisoning in Infants and Children, *J.A.M.A.* 98:125, 1932.
36. Winkelman, N. W., and Eckel, John L.: Lead Encephalopathy, *NEW YORK STATE JOURNAL OF MEDICINE* 33:427, 1933.
37. Ingleson, H.: The Action of Water on Lead with Special Reference to the Supply of Drinking Water, *Water Pollution Research: Technical Paper No. 4*, pub. by H. M. Stationery Office, London, 1934.

MEDICAL RADIO BROADCAST

Under the auspices of the Medical Information Bureau of the New York Academy of Medicine, the following radio address has been arranged, to be broadcast from Station WABC and the network of the Columbia Broadcasting System:

Thursday, June 6, 1:15 P.M.—Speaker: Dr. Richard L. Kovacs, Clinical Professor of Physical Therapy at Polyclinic Medical

School and Hospital. Subject: "Electrical Treatment."

Doctor: "Influenza in itself is not dangerous, but it can have serious consequences."

Patient: "So I noticed from your bill."
—Hummel, Hamburg.

IRRITATING PROPERTIES OF CIGARETTE SMOKE AS INFLUENCED BY HYGROSCOPIC AGENTS

MICHAEL G. MULINOS, M.D., PH.D., AND RAYMOND L. OSBORNE, A.B.

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NEW YORK CITY*

The irritation produced by cigarette smoke should be of great importance to the physician who has under his care the treatment of affections of the nose and throat. Offhand, it is rather difficult to place a definite value upon the importance of cigarette smoke in the production and perpetuation of these throat conditions. For any one patient, however, we may assume that cigarette smoke may play some part in the pathology of the throat condition for which he has consulted his physician.

The source of the tobacco, the flavoring agents, or the paper may each play its part in the qualities of the smoke. But besides these constituents of all cigarettes, there is another which has proved of interest. All cigarettes contain some agent for the maintenance of the proper moisture content of the tobacco. The present study is aimed at the two popular hygroscopic agents, glycerine and diethyleneglycol, and their influence upon the irritant properties of cigarette smoke.

The measure of irritation had to be made by purely objective means, in order that the confusion arising from subjective sensations might be eliminated. The smoke, too, must be produced and dissolved in various solvents in a uniform manner, in order that the final results may be comparable, and errors minimized. Lastly, the experiments must be repeated sufficiently often, in order that the figures may attain statistical significance. Hirschhorn and Mulinos¹ in 1930 devised a technic for the production of edema in the conjunctival sac of rabbits with mustard oil. Their technic was used in the present study, because it was found that the irritation from tobacco or cigarette smoke produced a readable reaction in the form of edema (Mulinos and Osborne, 1934²).

The cigarette was smoked in a special mechanical puffer designed to simulate the human smoking of cigarettes. Although no apparatus can take the place

of the human lips and mouth, any shortcomings on the part of the machine are compensated for by the greater uniformity in the production of the smoke. Mulinos and Osborne were able to demonstrate clearly that the irritating property of cigarette smoke was influenced (other factors remaining equal), by the type of hygroscopic agent used. It was shown that cigarettes made with glycerine were more irritating than when no hygroscopic agent had been used; while those that were made with diethyleneglycol as the moistening agent were definitely less irritating.

After the effects produced by hygroscopic agents in cigarettes made otherwise the same were shown, it became of interest to investigate the irritating properties of smoke from a number of brands of cigarettes known to contain glycerine as the hygroscopic agent, but which differed as to source of the tobacco, the flavoring, the paper, and the process of manufacture. The results are shown in the table and graphically in the chart. The data from the paper of Mulinos and Osborne are appended for comparison.

Five brands of cigarettes known to contain glycerine were studied.* From the table it can be seen that the average edema produced by the five glycerine cigarettes is substantially the same, i.e., 2.7 plus, while that from diethyleneglycol was 0.8 plus. It seems fair to conclude, therefore, that regardless of the irritant qualities of the smoke from the cigarette

* The glycerine content of these cigarettes was determined according to the method described in *The Analyst*, 1926, pp. 382-386. Cigarettes 1, 2, 3, and 4 contained from 2.1 to 3 per cent glycerine, according to season, while cigarette 5a contained 3.65 per cent glycerine, which was added for the purpose of this study, and corresponds in hygroscopic power to the 2.74 per cent of diethyleneglycol contained in cigarette 5b. Analysis of cigarettes 5b and 5c gave a blank of 0.7 per cent glycerine. A blank on Turkish tobacco, supposed to contain no glycerine, gave a value of 0.34 per cent.

proper, the addition of glycerine as moistening agent increases the irritation of the smoke.

Summary

Cigarettes identical in every other respect vary in irritating properties of their

smoke, according to the type of hygroscopic agent used. Cigarettes in which glycerine is used are more irritating than when no hygroscopic agent is employed, while those made with diethyleneglycol are definitely less irritating. Our results now show that, regardless of the blend

TABLE

Number of Experiments; Degree of Edema of Rabbit Conjunctiva

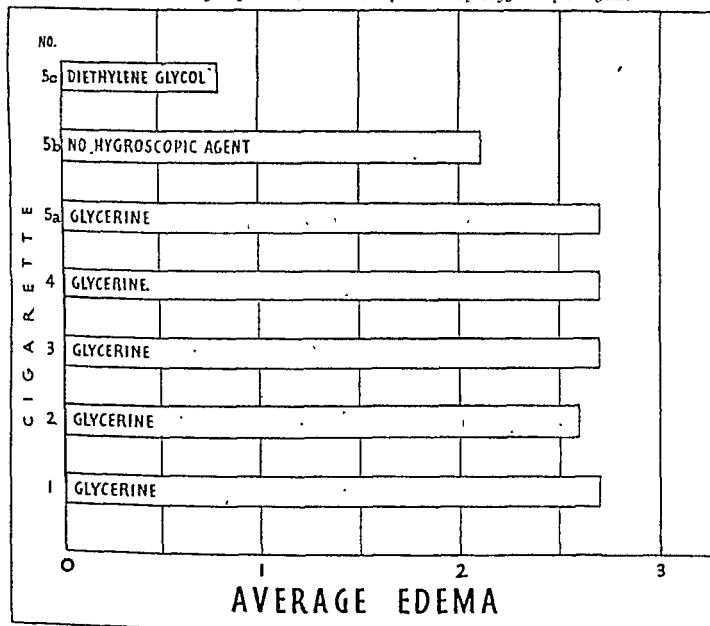
Cigarette	Hygroscopic Agent†	None	±	+	±±	++	±±±	+++	±±±±	++++	Expts. Total	Edema Average
No. 1	Glycerine....	0	0	0	0	4	4	7	0	0	15	2.6
No. 2	Glycerine....	0	0	0	0	4	9	10	1	0	24	2.7
No. 3	Glycerine....	0	0	0	0	2	8	14	3	0	27	2.7
No. 4	Glycerine....	0	0	0	0	3	9	15	0	0	27	2.7
No. 5a	Glycerine*....	0	0	1	3	25	42	83	8	3	165	2.7
No. 5b	Diethylene-glycol*....	9	26	30	11	4	0	0	0	0	80	0.8
No. 5c	None*.....	0	0	0	12	52	17	5	0	0	66	2.1

* From the data of Mulinos and Osborne, 1934.

† See footnote, page 590.

CHART

Edema Caused by Cigarette Smoke as Influenced by Hygroscopic Agents



Cigarettes No. 5, data from Mulinos and Osborne (1934); Cigarettes Nos 1 to 4, brands purchased on market.

of tobacco, flavoring materials, or method of manufacture, the irritation produced when glycerine is used as the agent is substantially the same—and greater than that caused by diethyleneglycol.

Although these results apply only to our method of smoking the cigarettes, and to aqueous or oily solutions of the smoke, and although the irritation is measured upon the conjunctival mucous membrane of rabbits, the investigations of Flinn³

in 1935 indicate that the same relative irritation produced by these two hygroscopic agents holds also for the human cigarette smoker.

630 WEST 168TH STREET

References

1. Hirschhorn and Mulinos, *Proc. Soc. Exptl. Biol. & Med.* 28: 168, 1930.
2. Mulinos and Osborne, *Proc. Soc. Exptl. Biol. & Med.* 32: 241, 1934.
3. Flinn, *Laryngoscope*, 45: 149, 1935.

THE ETHICS OF VIVISECTION

SAMUEL W. LAMBERT, M.D.

NEW YORK CITY

The opponents of experimentation on living animals are very actively at work in two principal fields. They seem to have concentrated their activities on the State of New York and on the Federal Government. The regulation of the practice and teaching of medicine is still under the jurisdiction of the separate states except in two particulars. During the late unlamented period of Prohibition, the application of the Eighteenth Amendment was under the control of Congress which had led to such irritation and complaint from the physicians of the country that the Federal Commission to investigate law enforcement, created at the request of President Hoover and placed under the chairmanship of Mr. George Wickersham, unanimously recommended a change in the law enforcing prohibition. Complete relief has been found in the repeal of the Eighteenth Amendment, by the adoption of the Twenty-first.

A second form of medical regulation which has been usurped by Congress through international treaties, is the oversight of the importation and distribution of narcotics. Because of the great benefits to humanity that might result, the medical profession has accepted without murmur a series of harassing regulations including a special tax (small to be sure) on the profession. The present results of this narcotic control are so inadequate that one must infer that the bootlegging of narcotics, especially morphine and heroin, is still a flourishing business.

The profession opposed the medical prohibitions of the Volstead Law vigor-

ously and has been equally emphatic in its criticisms of the attacks on animal experimentation. The proponents of antivivisection measures seem to have singled out New York because of its size on the theory that when they have succeeded in the most populous State, the remaining states will follow such a leader. Congress has jurisdiction in such matters only over the District of Columbia but the antivivisectionists unquestionably feel that a law by Congress for the District could easily be held up as a model example of Federal authority for the individual States to follow.

The antivivisectionists have been continuously defeated in both fields of this contest. This was done the more easily in proportion as they enlarged their claims. Recently they have concentrated their attacks on a single point, possibly in the hope that if successful in this, the legal prohibitions might be extended successfully to cover all experimentation on living animals. The recent proposals for antivivisection laws have attempted to enact a complete prohibition of the use of dogs for experimental purposes in the laboratories of the medical sciences. The claims against such experimentation include denials of any profit to mankind arising from the use of animals in such investigation; the denial of the value of preventive vaccination against smallpox, of the cure or prevention of diphtheria by antitoxin, of the futility of inoculation against typhoid fever—to mention only a few of the more prominent successes in preventive medicine.

The campaign to prohibit the use of the dog is based in part on its alleged failure in the results obtained and on an appeal to human sentiment in favor of the dog as the friend and companion of man. It is impossible to refute this latter point of view by denying the facts of a friendly sympathy between the human man and the canine animal. This is a very just and understandable feeling. But there are dogs and dogs, and there are friendly and unfriendly humans. In the final estimate of the ethics of the question, one must decide whether the advantages gained overbalance the harshnesses of the practices. It has always been possible to confute the arguments against scientific results, of the Anti's, by statements of the facts of scientific medicine and persuade the legislators of Congress and state assemblies of the reasonableness of the claims of modern experimentation on animals.

The earliest printed description of vivisection is from the pen of Vesalius, and was published in his treatise concerning the structure of the human body, in the year 1543. He describes many operative procedures all of which were performed, of course, without anesthesia. Some of them date back to the time of Galen, A.D. 200. Galen and Vesalius prove that the seat of the soul in the body is not in the heart as was taught by Aristotle, but is in the brain. The proof consisted in showing that removal of the brain caused immediate death but that after the removal of the heart with a controlling ligature of the great vessels, pigs or dogs, and as Vesalius says, "especially cats" will walk about for a short but appreciable length of time.

Vesalius complains of the antivivisectionists of the sixteenth century; that he is prevented from experimenting on the brain of the living animal because of the objections of "our present-day theologians" who would prevent the anatomist from vivisectioning the brain as an unethical act of "depriving brute beasts of memory, of reasoning, and of meditation." Anesthetics removed this criticism of the sixteenth century but the opposition to the progress of science for the benefit of man still persists.

In a study written on this chapter on vivisection from the treatise of Vesalius,

the following quotation presents some thoughts on the subject of the use of animals in general and of dogs in particular, in scientific experimentation in the laboratories of physiology and pathology, and most recently in those of clinical medicine.¹

Modern experimentation on animals has developed greatly since the sixteenth century, and the universal use of general anesthesia results in inflicting on these animals no more suffering than is endured by human beings during surgical treatments, less in fact, for most of these animals are not allowed to suffer the pangs of convalescence. Bacteriology and immunology have added to the older methods of vivisection many valuable uses for experimentation on animals both in determining a correct diagnosis of human illness in individual cases, and in the scientific study of the causation of disease, and of its successful treatment by vaccination, inoculation, and the administration of antitoxins. The older procedures included demonstrations of the normal physiology of circulation and digestion. This early vivisection included also the training of younger graduates for a career in surgical specialties.

Recent discoveries from the experiments on animals include the application of insulin in the control of diabetes, the use of a liver diet in the care of pernicious anemia, and the perfecting of the transfusion of blood from man to man. The point of attack has changed its character in recent years, and the anti-scientists have raised the plea that the dog should be spared because of his friendship for his fellow-animal, man, and have concentrated for the present on the saving of dogs from such a fate while leaving the guinea pig, the rabbit, the white rat and white mouse, the cat, the horse and the monkey to bear the brunt of this sacrifice to the science of immunity as applied to the domesticated animals as well as to man.

Yes, the dog is the friend of man, and the human experimenter is the friend of the dog, and has included rabies and distemper in his curative investigations. There are special reasons why the dog cannot be spared. The dog is omnivorous but largely carnivorous, as is man, and his internal anatomy especially of the liver, gastrointestinal tract, pancreas, and kidneys, is akin to that of man. The dog, as no other animal could, has contributed very mate-

¹ *A Reading from Vesalius*, by Samuel W. Lambert. Transactions of the Charaka Club, Vol. VIII, Columbia University Press, 1935.

of tobacco, flavoring materials, or method of manufacture, the irritation produced when glycerine is used as the agent is substantially the same—and greater than that caused by diethyleneglycol.

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NEW YORK STATE JOURNAL OF MEDICINE

Published Semi Monthly under the Auspices of the Journal Management Committee

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EDITORIALS

The Annual Meeting

The 1935 session of the Medical Society of the State of New York has passed into history. It was a lively session. At the meeting of the House of Delegates, many important topics were discussed, decisions made, and State policies determined. In our next issue, the details of the discussions will appear.

Probably the one action to which County societies are looking with interest will come from a special committee which was set up to formulate standards and plans for use by County societies, to meet their obligations under the new laws in regard to Workmen's Compensation. These plans will soon be available, and while autonomy of the County societies remains unimpaired, they will offer a goal toward which County societies can aim in achieving a working formula for co operation in the enforcement of this law.

The House of Delegates again affirmed its unqualified opposition to any form of compulsory health insurance. Nevertheless, it directed the appointment of a committee to work out any feasible scheme within the frame work of the ten point program of the American Medical Association, which will overcome the economic barriers which prevent the public from getting adequate medical care generally.

In point of attendance, in interest in scientific sessions, and in the high calibre of the exhibit, both technical and scientific, the meeting was an unusual success.

Dr. Arthur J Bedell

At the recent meeting of the State Society, Dr Arthur J Bedell finished his term of office as president, and erected a milestone on his productive career in the ranks of organized medicine.

The year of his presidency was a trying one. It witnessed the development of the STATE JOURNAL into an organ of opinion, and one which seems to have met with the approval of the profession generally. The Workmen's Compensation Act was safely seen through the Legislature. Committees were set up in the district branches to handle the conflicting elements within our own ranks and iron out differences. At the scientific session in Albany, a new feature was developed under his leadership which he termed the "Instructional Hour," which from all reports was received very favorably.

Fortunately for the Medical Society of the State of New York, the termination of his presidency does not terminate Dr Bedell's activity. We congratulate him on the fine session held at Albany. We hope for many more years of activity in organized medicine.

Dr. Frederic C. Conway

We would be derelict in our duty if we did not make public note of the indebtedness of the Society to Dr. Frederic C. Conway, who was Chairman of the Committee of Arrangements in Albany, for the manner in which he handled the problems which came before him. From the opening of the House of Delegates to the closure of the last discussion of the Scientific Session, every problem had been carefully thought out in advance and planned with order, thoughtfulness and courtesy. The high order of executive ability he displayed in the arrangements and his attention to the smallest details, leaves us under a debt to him for his fine work. Not the least of the fine session, were the stately halls at the Capitol in which it was held. We commend Dr. Conway and believe that in doing so, we voice the opinion of all delegates and non-delegates of the Society.

Control of Proprietary Hospitals

The regulations issued by the Department of Hospitals of the City of New York for the supervision of private sanatoria may spell the beginning of a new régime for proprietary institutions all over the country. The Council on Community Relations of the American Hospital Association is studying the New York City rules as a possible basis for control elsewhere. If they prove as acceptable in practice as they are in theory, there is little doubt that they will be extended to other localities.

The principal features of the new rules are the requirements as to physical facilities and personnel. Private hospitals may no longer be located in apartment houses and hotels. Special rooms and technic are required for the isolation of contagious diseases; at least one portable shock-proof x-ray apparatus must be provided, under the supervision of a competent medical roentgenologist; and institutions with a capacity of thirty beds or more must maintain a laboratory under

the direction of an experienced clinical pathologist.

No less important are the staff requisites. Operating and delivery rooms must be in charge of a registered nurse and at least one graduate nurse shall be on floor duty at all times. Each hospital must have a full-time resident physician *and a medical board consisting at least of an internist, a surgeon, a pathologist and an obstetrician if maternity service is given.* This latter requirement is a distinct innovation and should go far to improve the caliber of proprietary institutions, since the medical board is charged with responsibility "for the maintenance of proper professional and ethical standards."

On the subject of administration the rules say little, but that little is pertinent. Adequate clinical records must be kept; annual statistical reports are required; and fee-splitting between hospitals and referring doctors, whether direct or indirect, is strictly forbidden.

It is needless to dwell upon the benefits to the public of stricter control over proprietary medical institutions. Under the new rules patients in private sanatoria in Greater New York will enjoy the same safeguards as in municipal and voluntary hospitals. To the medical profession the advantages are no less great. The large number of physicians who must use proprietary hospitals for want of other institutional connections are assured of adequate technical facilities and a favorable environment for their cases.

With most of the governmental and voluntary hospitals of the country "closed," high grade private sanatoria are essential to a considerable proportion of the public and the profession. Other communities should follow in the footsteps of New York City and make such institutions safe for doctor and patient.

"Revaluing" Scientific Degrees

Unauthorized schools have cheapened scientific titles by bestowing degrees promiscuously on all willing to pay the advertised price. The McNaboe bill,

to which Governor Lehman has affixed his signature, puts an end to this sort of "inflation" Under it "no person can use any name, title or descriptive material indicating or tending to imply that he conducts a school of law, medicine, dentistry, pharmacy, veterinary medicine, nursing, optometry, chiropody, architecture or engineering unless the right to do so shall have been granted by the Board of Regents "

The diploma mills which mulct so many gullible aspirants to professional glory and turn unqualified practitioners loose upon the unwary public cannot survive enforcement of the new law. Deprived of the right to advertise, without high sounding names, they stand no chance of attracting credulous pupils who mistakenly believe they have found a short cut to the professions. This will naturally diminish the number of untrained healers who prey upon the gullible sick on the strength of an invalid and unauthorized degree.

The new statute is a reaffirmation of the State's intention to limit professional practice to qualified graduates of accepted schools. This aim would be materially helped by abolition of the schools of naturopathy, chiropractic, and so on, whose graduates' sole hope of economic success lies in violation of the Medical Practice Act. Deputy Attorney General Ullman and his staff have successfully prosecuted several such "colleges" for conferring degrees unauthorized by the Regents. The McNaboe law, which clarifies and strengthens the State's purpose, is an incentive to continued campaigning against irregular schools.

Dr. Floyd S. Winslow The President-elect

In Floyd S. Winslow the Medical Society of the State of New York has elected to the position of President elect a man who is not unskilled or untrained in organized medicine. He has been president of the Medical Society of the County of Monroe, and has been in the House of Delegates for many years.

From 1933 to the present time, he has been Vice-Speaker of the House of Delegates. It is a wise provision which selects from men who are trained, those who from time to time shall lead. The destinies of the Medical Society of the State of New York are in safe hands. When the year of observation and study is over, Dr. Winslow will come into the highest office in our gift with the loyal support of all, and carry on a tradition which has grown and become stronger as the years passed.

Eosinophilia in Syphilis

The exact rôle of the eosinophile in the defense of the body has as yet not been determined definitely. With the more precise means of studying the polymorphonuclear cells it has been shown that the eosinophiles disappear with the onset of an acute bacterial infection, and reappear only when the severity of the disease has abated. This would tend to indicate that they possess reparative rather than phagocytic properties. This is further borne out by the fact that, while of myelogenic origin like the neutrophils, the eosinophiles possess less amoeboid movement and do not produce proteolytic or lipolytic ferments.

In certain conditions, however, a marked increase in the number of circulating eosinophiles is noted. Parasitic diseases, and especially allergic phenomena, show definite eosinophilia. The toxins of the tubercle bacillus produce a marked response in the eosinophiles and clinical evidence shows that there is a like response to the toxins of the spirocheta pallida. Regarding the latter, additional proof is furnished by the findings of Spangler.¹ Hemograms were made of 100 patients with positive Wassermann reactions, and of 100 adults whose Wassermann reaction was negative. Care was taken to exclude all who showed allergic manifestations, or in whom the presence of parasites was suspected. Of

¹ Spangler, R. H. *Eosinophilia in Syphilis*. *J. Laboratory and Clinical Medicine* 20:733, 1935.

the 100 positive cases, 47 were asymptomatic and had never received treatment. Of the positive group as a whole, 40 per cent had eosinophilia while only 4 per cent of those with negative Wassermanns showed an increase in eosinophiles. Of further interest is the finding of a higher percentage of eosinophilia among the 47 asymptomatic cases than that recorded for the positive group as a whole.

Assuming that eosinophilia is to a large extent a criterion of allergy, Spangler feels that the high incidence of eosinophilia in syphilitics of various stages speaks for the immunologic relationship of allergy and syphilis. Since the incidence of unsuspected or unrecognized syphilis is high and the basic factor of many allergic disturbances is as yet unknown, the presence of an eosinophilia where all other causes have been ruled out calls for a thorough search to uncover a possible dormant luetic disease.

Venoclysis and Pulmonary Embolism

In recent years the injection of drugs and fluids by continuous venoclysis has gained in popularity. Salvarsan and serum are often thus administered, and a continuous intravenous drip of glucose is frequently employed in the treatment of enteritis in children and in combatting postoperative shock. While generally regarded as a harmless procedure, reports are on record of numerous instances of pulmonary emboli which have resulted following the injection of fluids into the veins. Shivers¹ noted the frequent occurrence of emboli to the lung after the injection for varicose veins. Bsteh and Teichmann² reported similar mishaps. Pulmonary emboli have also been observed following the continuous intravenous injection of glucose.

¹ Shivers, G. C.: Pulmonary Embolism from Arsenicals Injected Intravenously, etc., *Arch. Dermatol. and Syph.* 27:901, 1933.

² Bsteh, W. and Teichmann, M.: Pulmonary Emboli Developing after Injection Treatment of Varicose Veins, *Zentralbl. f. Chir.* 60:376, 1933.

Rumold³ conducted a series of experiments in dogs in an attempt to determine the causative factor for the pulmonary emboli following venoclysis. Various solutions were used; some of the animals were permitted a limited motion while the continuous venoclysis was being given, whereas others were kept immobile; and in a final series of experiments a canula was placed in the vein and allowed to remain in situ though no fluid was sent through it.

At autopsy, all of the experimental animals showed marked pulmonary infarcts which usually were associated with pneumonia and edema. Where the canula alone was placed in the vein, microscopic study revealed an inflammatory reaction of the entire vein wall with an occlusion of its lumen by a fragile thrombus. Rumold feels that pulmonary emboli and thrombosis are not infrequently associated with continuous venoclysis in the human, even though they may not be manifest clinically. In view of these findings, therefore, it seems evident that continuous venoclysis as a therapeutic measure is not without danger, and the physician who employs it must realize the risk to his patient of pulmonary infarction. Only where specific indications for its use are present should this method of administering drugs and fluids be allowed to supersede less hazardous but equally efficient measures.

³ Rumold, M. J.: Experimental Pulmonary Embolism Associated with Venoclysis, *Arch. of Surg.*, 30:685, 1935.

CURRENT COMMENT

FLORENCE FISHER PARRY's column, "I Dare Say," in the *Pittsburgh Press* contains a fine eulogy on "Your Physician." Among other things she says: "I dare say there are certain restricted fields in medicine in whose confines the legislative hand could work productively. But the ineffable value of the *Human Touch* in medicine is something that transcends all legislation. What legislation, indeed, what politics, what state control or organized social program can hope to substitute that *Human Bond* that

exists between the *Family Doctor* and his patient?

THE RECORD for the first three months of 1935 among the millions of industrial policy holders in the United States and Canada of the Metropolitan Life Insurance Company 'gives good ground for the hope that the present year will set a new low mortality record for this class.' So the report of the Company is published in the *New York Times* of May 7th states. Here again the facts controvert those who cry that American medicine has failed. The death rate is off 2.6 per cent in this first quarter of the year.

AN EDITORIAL from the *New York Times* of May 4, 1935 states that Richard Hooker, the eminent theologian of the sixteenth century, made some interesting observations on the subject of regimentation. These are to be found in his "Ecclesiastical Polity." "At first," it reads, "some kind of regimenting being once approved little was thought of the manner of governing. So that the thing which they devised for a remedy did but increase the sore which it should have cured."

Times have changed but regimentation still holds the same evils.

THE MEDICAL SOCIETY of the County of Westchester was founded in 1797, and is the second oldest medical society in the United States. It is the sixth largest in the State. The society has a larger mem-

bership than the State medical societies of 13 of the States.

FEVER THERAPY is one of the outstanding therapeutic measures of today. Much regarding it remains to be settled. Therefore, the forthcoming international conference on Fever Therapy to be held in New York in October, 1935, deserves early mention. Delegates are expected from Asia, Australia, South America, and Europe and have signified their eagerness to attend. We should take pride in this purely American idea.

THE BRONX COUNTY *Medical Bulletin* for May remarks that 'the mills of the gods grind slowly, but they grind exceedingly fine,' in congratulating Attorney General Bennett on the beginning of his action against the Life Extension Institute for its alleged illegal practice of medicine. The medical profession should not be unmindful of the pioneer work done by the Medical Alliance of New York in the matter.

THE BRONX COUNTY Medical Society at its April meeting took exception to certain types of editorials which appear in our journal and "resolved" to record its disapproval of them. It stigmatized these editorials as unrepresentative of the temper of physicians in general, and did not seem to approve even of the language we used.

We are writing the best English we know. We are trying to represent the policy of the State Society as it is declared by the House of Delegates. Perhaps a re-reading will win approval. Second thoughts are best some times!

Correspondence

[This Journal reserves the right to print correspondence to its staff in whole or in part unless marked private. All communications must carry the writer's full name and address which will be omitted on publication if desired. Anonymous letters will be disregarded.]

Corroboration from the Right

416 Ocean Avenue
Brooklyn, N. Y. C.

To the Editor

The ferocious attack of Dr. Tobias on Mr. Hartz published in the current issue of the *STATE JOURNAL*, demonstrates the rabidness that the proponents of socialized medicine have acquired and the open mindedness that they have lost in the realm of discussion. Anyone who cannot see eye to eye with them regarding their own conceptions of the glories of socialized medicine or who has the temerity to dissent from their viewpoint is a fit subject for destruc-

tion. Whether Hartz has or has not any Nazi leanings or affiliations is beside the point. According to those who know from actual experience what he says pertaining to the evils abuses and stultifying influences of socialized medicine is true.

Many of us still remember the evils inherent in the so called 'lodge practice' of 25 or more years ago. And that was but "medical insurance" on a comparatively small scale. From that, at least, a man felt that he had an escape after a shorter or longer period of time and he took advantage of it as a stepping stone to a private practice, looking forward to the day when he could throw off the necessity of currying

favor with the lodge powers that be and compulsion to shut his eyes, if not actually to abet the dishonest practices of the lodge members on pain of complaints being trumped up against him and losing his "job." The acquiescent fellow was the one who got along. Under your socialized medicine, with bureaucracy rampant and similar abuses on an enormous scale, the medical profession is bound to be prostrate. And it couldn't be gotten rid of in a generation. They certainly must be phantasmagoric who pretend to see any benefits in socialization of medicine. Let the worker be given a living wage and he will be able to meet his own medical problems without the aid of "foundations" and health centers donated by capitalists of generally ill-gotten wealth. Let the hospitals resume their function of being institutions for the treatment of the sick by private physicians instead of competing with the medical profession and the very men who render them service, without whom they cannot exist, and the problems of the doctor will more closely approach solution.

PHILIP FRANK, M.D.

May 17, 1935

Nasal Ionization

26 South Goodman Street
Rochester, New York

To the Editors:

On page 506 of the issue of the NEW YORK STATE JOURNAL OF MEDICINE for May 1, 1935, is an Editorial headed "Hay Fever" which I and many of my associates feel deserves comment.

The statement at the head of the editorial page, "The Editors do not assume any responsibility for opinions expressed by the individual authors of papers and letters published in the JOURNAL," would seem to mean that the Editorial Board does assume responsibility for the editorials.

The writer of the editorial in question seems to be much more certain that nasal ionization has been "perfected" than do a large proportion of the physicians, not only in this community, but in many others. Several of my colleagues among the nose and throat specialists have expressed serious doubts as to the wisdom of such a form of treatment in as much as there are not, as yet available, any carefully controlled studies as to the amount of damage, if any, which may result from such treatment. It may interest the writer to know that such studies are being undertaken at present by Alexander and his associates in St. Louis.

However, it is the last sentence in this editorial, namely, "It suffices to state here that no special training is required,—any competent physician is capable of giving his patients the full benefits of these methods."—which seems most open to criticism. I believe that it is proper to consider any physician to be "competent" who is licensed to practice medicine in this State. It would seem perfectly logical, therefore, for me, in giving a course on allergy to the students in the Medical School of the University of Rochester, to inform them that as soon as they are graduated and licensed, it would be entirely proper for them to treat the noses of patients suffering from hay fever either with pure carbolic acid or by ionization. I must confess, however, that I shall indulge in no such teaching, and that I agree very thoroughly with Dr. Palmer, in one of the articles quoted, that such treatment should be given only by individuals especially trained in the nose and throat specialty.

It may be well to state that I am not a nose and throat specialist and that this letter is not inspired by any feeling that work may be taken away from me. I am very much interested in the manifestations of allergy and naturally desire to use the methods which will give the best results to my patients. I have no fixed convictions either for or against treatment of hay fever by ionization or the application of carbolic acid. If time proves that these preliminary reports are even approximately correct, I can conceive that these measures may well become standardized and used with much benefit. I cannot escape the conviction, however, that the writer of this editorial failed to give his subject truly careful consideration before expressing himself in print. This feeling is increased somewhat when I find that he failed to check his references with care. I would call his attention to the fact that the article by C. A. Spivake was published in 1933, and not in 1932.

It seems to several of us that the surest way to ruin what may be two methods of some value is to urge that they be used indiscriminately by physicians who have had no special nose and throat training however "competent" they may be in the legal sense. It is rather shocking to a large number of physicians in this community that the Editorial Board of the STATE JOURNAL permits and seemingly approves the publication of such an editorial.

STEARNS S. BULLEN

May 17, 1935.

Society Activities

Committee on Legislation

SUPPLEMENTARY BULLETIN, MAY 18, 1935

Yesterday the thirty-day period allowed the Governor for action upon bills subsequent to the adjournment of the Legislature, expired. On April 22 we sent you our final bulletin, which contained a record of the bills that were left with him. A statement of his disposition of them follows:

Senate Int. 1; Assembly Int. 1: Unemployment insurance, enacted.

Senate Int. 77; Assembly Int. 202: Civil service positions, vetoed.

Senate Int. 123; Assembly Int. 150, 210: Physical examination of employees, vetoed.

Senate Int. 270; Assembly Int. 199: Supervisors to employ dentists, enacted.

Senate Int. 401; Assembly Int. 489: Contraceptive appliances, enacted.

Senate Int. 492; Assembly Int. 763: Venereal disease treatment by local boards of health, enacted.

Senate Int. 548; Assembly Int. 738: Drugs to be manufactured by licensed pharmacist, enacted.

Senate Int. 572; Assembly Int. 831: Money to be spent on needy blind, enacted.

Senate Int. 592; Assembly Int. 762: Communicable diseases a responsibility of public welfare district, enacted.

Senate Int. 787; Assembly Int. 1063: Relative to acquisition of property by foreign corporation, enacted.

Senate Int. 862; Assembly Int. 1024: Removal of indigent person, enacted.

Senate Int. 898; Assembly Int. 1157: Treatment of school children with defective sight or hearing, enacted.

Senate Int. 1058: Physical examination of females, enacted.

Senate Int. 1077; Assembly Int. 1473: Employees of mental institutions not to be liable for damages, enacted.

Senate Int. 1164; Assembly Int. 1061: State responsible for care of person having no settlement, vetoed.

Senate Int. 1374; Assembly Int. 1891: Appropriation for preventive and corrective physical education, enacted.

Senate Int. 1413; Assembly Int. 1776: Transportation of physically-handicapped children to school, vetoed.

Senate Int. 1414; Assembly Int. 1861: Practice of podiatry, enacted.

Senate Int. 1415; Assembly Int. 1862: Changing name of Pedit Society, enacted.

Senate Int. 1491; Assembly Int. 1883: Sili-cosis, vetoed.

Senate Int. 1556; Assembly Int. 1935: Eight-hour day for employees of hospitals, vetoed.

Senate Int. 1646; Assembly Int. 2137: Relative to Homeopathic Medical College, enacted.

Senate Int. 1668: Regents to conduct hearings by committees, enacted.

Senate Int. 1707: Purification of swimming pools, vetoed.

Senate Int. 1870: Private banker to pay customers debts in case of death, enacted.

Senate Int. 1894: Prohibiting conduct of professional schools not licensed by Regents, enacted.

Senate Int. 2006; Assembly Int. 2426: Canney—medical abuses, enacted.

COMMENT

This amendment proposes to make some amendments to the recently enacted Medical Abuses Bill, Int. 19. Some of its suggestions are in keeping with the intent of the law, but one is in direct variance with it. The several amendments are: 1. Authorization for the employment of a physician on a salary basis by an authorized compensation medical bureau or laboratory; 2. That physiotherapist, when mentioned, shall be considered "registered physiotherapist"; 3. Provision for the licensing by the Commissioner of Labor, on recommendation of a County Medical Society, of separate laboratories and bureaus engaged in x-ray diagnosis or in physiotherapy or other therapeutic procedures, which participate in the diagnosis or treatment of injured workmen; 4. Provision that an insurance carrier may maintain rehabilitation bureaus if authorized by the Commissioner on recommendation of a County Society. This amendment changes the intent of the law which is definitely expressed in the first sentence of Section 13-J which it amends. This portion reads: "An insurance carrier shall not participate in the treatment of injured workmen." It is therefore, obvious that the amendment, by proposing to give insurance carriers the right to provide treatment, does not harmonize with the unamended section; 5. Extension of duties and powers of the Industrial Council to matters affecting the administration of the State Insurance Fund which concern the medical care of injured workmen.

Senate Int. 2042; Assembly Int. 2462: Legislative emergency health station, enacted.

Senate Int. 2104; Assembly Int. 2505: State Health Commissioner to be responsible for certain Federal funds, vetoed.

Senate Int. 2108; Assembly Int. 2507: Authorizing Governor to accept provisions of any act of Congress making grants to State for aid to dependent children and appropriating \$30,000 for Social Welfare Department, enacted.

Senate Int. 2113: Creates Richfield Springs authority, vetoed.

Assembly Int. 372: Enlargement of Public Health Council, enacted.

Assembly Int. 1649: Creating pest abatement districts, vetoed.

Assembly Int. 1774: Relative to naming illegitimate children, vetoed.

Special Committee on Workmen's Compensation

Announcement is made that a form of application for listing of physicians by County societies for compensation work

under the new Chapter 258 of the laws of 1935 has been drawn up. These forms will be distributed to the County secretaries; and it is advised that all physicians, both members and non-members within each County, be informed in some manner that the County societies are ready to receive applications.

CHAS. GORDON HEYD, *Chairman*

FREDERIC E. ELLIOTT

DAVID J. KALISKI

AMERICAN MEDICAL GOLFING ASSOCIATION TOURNAMENT ON JUNE 10, 1935 AT ATLANTIC CITY

The American Medical Golfing Association Tournament has suddenly become international. The A.M.G.A. invited the Canadian Medical Association to come in. The invitation was accepted by Dr. T. C. Routley, General Secretary of the C.M.A., who replied: "I am sure our Canadian colleagues will appreciate highly the honour you have done them in asking them to be present at the Twenty-First Annual Tournament of the American Medical Golfing Association." International golf will be played at Atlantic City on June 10 when members of the American Medical Golfing Association and golf enthusiasts of the Canadian Medical Association join forces at Northfield Country Club.

Two additional events will be added to the day's already generous program of nine events and seventy prizes:

1. The International Event, featuring the "President's Cup," a new trophy presented by Dr. Chas. Lukens of Toledo, and nine other American prizes for our Canadian

friends to carry back across the border.

2. The Canadian Event, featuring the "Ontario Cup," or championship trophy, and the other prizes of the Canadian Medical Association.

Many American golfers having medical friends in Canada are arranging matches for the international medical golf tournament of June 10. It is expected that 200 players will tee off between 6:00 A.M. and 3:00 P.M., in this 36-hole and 18-hole competition. The Atlantic City Committee has arranged that free buses will leave from Hadson Hall; from the Shelburne Hotel; and from the Ambassador Hotel at 8:30 A.M., and will return from Northfield in the evening at 10:30 P.M. Dinner at 7:00 P.M. with Dr. Frank A. Kelly of Detroit as toastmaster, will be followed by distribution of trophies and prizes by Dr. Walt P. Conaway, Chairman of the Atlantic City Golf Committee.

For entry blanks, write Bill Burns, Executive Secretary, 4421 Woodward Avenue, Detroit.

GRIM REAPER'S SICKLE DULLER

New minimums in death rates were established during the first three months of this year, according to Dr. J. V. De Porte, Director of Vital Statistics of the State Department of Health.

The total death rate was 12 per 1,000 population. The infant mortality rate was 56 deaths of infants under 1 year of age per 1,000 live births, while the maternal mortality rate was 52 deaths per 10,000 total births. None of these has ever been lower.

Deaths from tuberculosis and pneumonia were noticeably low, while the appendicitis rate has not been lower since 1924. The suicide rate, 14.7 per 100,000 population, was one of the lowest in eight years. In the entire State there were 495 suicides as compared to the maximum of 650 during the first quarter of 1932. Automobile accidents also reached a new low.

The birth rate, 13.5 per 1,000 population, was lower than for the corresponding period last year. Reportable diseases during the three months totaled 111,292, compared with 72,691 for last year's quarter.

"Practically all of this increase," Dr. De Porte said, "was the result of the greater prevalence of measles and the epidemic spread of German measles, mainly in the up-State area."

Mrs. Mack: "I'm bothered with a little wart that I'd like to have removed."

Dr. Jones: "The divorce lawyer is three doors to the right."—*Nebraska State Medical Journal*.

A two-headed calf has been reported by an Iowa farmer. Probably the brain trust influence asserting itself.—*Ohio State Journal*.

County Societies

Cattaraugus County

An excellent dinner, and an excellent speaker, made the April meeting of the Cattaraugus County Medical Society, held at Salamanca, April 8, a thoroughly enjoyable affair, according to a report sent in by Dr. Joseph P. Garen. The speaker of the evening, Dr. Frederic E. Elliott, Chairman of the Committee on Economics of the State Medical Society, devoted a large portion of his address to a complete exposition of the new amendment to the Workmen's Compensation Act. He listed the new duties and responsibilities of the County medical society, and made many valuable suggestions as to the *modus operandi* in the Society's share in the administration of the measure.

In the discussion following the address, brief talks were made by Dr. Herbert Bauckus, Buffalo, President of the Medical Society of the County of Erie; Dr. John Hoffman, Kenmore, Chairman of its Committee on Economics; and Dr. Joseph O'Gorman, Chairman of the Committee on Public Health and member of the State Committee on Economics.

It was moved and unanimously carried, that Dr. Bourne, the President of the Society, be empowered to appoint a committee, to study the entire matter of the County society's participation in the Workmen's Compensation Law; and report at the next meeting of the Society with a detailed plan to carry out the new duties and responsibilities.

The following applicants were favorably reported upon by the Censors and welcomed into the Society: John Lorenzo, Norman P. Johnson, Henry R. O'Brien, John H. Korn, Joseph R. Giunta, and Robert D. Ralph.

Dutchess-Putnam Counties

"Grossly inadequate and unfair" are the terms applied to Poughkeepsie's plan of medical service for the indigent sick, as expressed by the Dutchess-Putnam Medical Society at its meeting on April 10. Under the present plan a single physician is engaged for this service, with slight help from other doctors employed on part time, and the medical society's committees declare that the number of persons on relief in the city has been upward of 5,000 in the last two years and that the number of persons who have not been forced to

accept relief but are unable to pay for medical care (yet whose medical care is mandatory under the relief law) has been greatly increased by the present economic conditions.

The inability of the city physician to take care of this number causes a large number of cases to be referred to Vassar hospital dispensary, placing an unjust burden on the hospital staff.

The report said that "although the traditional willingness of the physician to do his share of charitable work in the community remains unimpaired, they can no longer carry this increased load."

Erie County

Great popular interest is being shown in the new "Hall of Man" in the Buffalo Museum of Science. Crowds gather about the "transparent man," life-sized and made of a thick and durable but transparent substance known as celloid molded to shape around a complete human skeleton. Clearly discernible, one after another, are the principal blood vessels, glands, heart, lungs, brain and viscera. Near by is "Wabbling Willie," a skeleton endowed with the ability to move. Eerily he beckons to the passerby, rolls his head from side to side in coy gestures, twisting his wrists the while. These exhibits draw the people to the Museum, and then others instruct them more seriously in practical and vital health lessons.

Jefferson County

A big easy chair with a footrest was the appropriate gift to Dr. Robert F. Gates, veteran Brownville physician, at a banquet on April 25 celebrating his 75th birthday and 50 years of service. Over 200 were present. Dr. Gates has also for 40 years been a member of the local school board.

Kings County

In at least two large Brooklyn hospitals, experiments are under way with the "hot box," a new apparatus and technic in artificial fever to bake out disease, which was widely heralded at the recent annual meeting of the Federation of American Societies for Experimental Biology in Detroit.

The Brooklyn institutions, however, are proceeding cautiously and prefer to withhold judgment on the benefits of the "hot box," which raises an individual's tempera-

ture to 106 or 107, until more results have been obtained.

In Detroit, the fever box was demonstrated as curing tuberculosis in animals and it was brought out also that the device had been used on at least 100 human beings during the past year with good results in other diseases—certain types of arthritis, eye infections, pelvic inflammations in women, and in one case of bone cancer used with x-ray.

LAST YEAR broke all records in the number of readers and of books consulted at the library of the Kings County Medical Society, the fifth largest medical library in the United States. The pressure, in fact, is becoming so great, says Dr. Jacques C. Rushmore, directing librarian, that "it may become necessary in the very near future to limit our facilities to non-members to specific hours of the day in order to afford greater opportunity to our members."

Additional income and endowment are urgently needed.

Livingston County

Dr. George B. Campbell, of Nunda, who died on April 7 at the age of 65, organized the first large U. S. Army hospital in France, at Chaumont. He was under fire, gassed, and wounded, and still carried a fragment of shell in his knee. He was born in an army post in New Mexico, the son of an officer, and served with General Pershing in his campaign in Mexico.

Monroe County

The new hospital insurance plan for Rochester contemplates the provision of three weeks of hospital care for \$7.80 per year. It will be open only to employed persons and their dependents in groups of ten or more, and the present relation between doctors and patients will not be disturbed. Patients will choose their own hospitals. Rochester hospitals joining in the plan include Genesee, Strong Memorial, St. Mary's, Park Avenue, Highland and General.

Nassau County

Empty flour sacks are made into baby dresses by expectant mothers at weekly meetings arranged by Miss Elizabeth Churchill, district nurse at Manhasset, according to her report at a meeting of the Manhasset Health Association. She buys the sacks at 6 cents each, and they are washed, bleached, and made into garments.

One sack makes two dresses. Donations of materials and sacks were requested.

New York County

More than 100,000 quarts of fresh milk a day are now being distributed in New York City to undernourished and needy children, babies and nursing and expectant mothers, through the facilities of the Emergency Relief Bureau.

THE ORDER of Chevalier of the Legion of Honor has been conferred by President Lebrun of France upon Dr. David J. Kaliski, former president of the Medical Society of the County of New York.

Dr. Kaliski was leader in 1932 of a group of American physicians who visited French hospitals and thermal resorts at the invitation of the Government.

THE NEW plan of low-cost care in New York City hospitals is also to be made available to persons living within 50 miles of the city, it is announced. It seems that some have overlooked the fact that members are accepted only in groups of 10, half of them gainfully employed. Individuals cannot join singly, or anyone over 65. The membership fee is 90 cents a month, or \$10 a year, and the member is entitled to 21 days of hospital care during that year, his own family physician to decide if he needs hospitalization. Doctors' fees are not included in the insurance premium, but must be paid separately.

Oneida County

At the quarterly meeting of the Oneida County Medical Society on April 9, Dr. M. D. Graham, president, appointed a committee headed by Dr. Robert Sloan to aid in reducing the death rate in maternity cases.

Dr. Karl Gruppe, Utica, was appointed a representative of the society on the State Committee for Hard of Hearing.

Dr. F. M. Miller, Sr., chairman of the committee on medical economics of the Society and a member of the similar committee in the State Society, and a member of the Governor's special committee on medical economics, described the Garrett plan of a medical service bureau as now operated in Washington.

He told how this County might adopt a similar plan and suggested a committee from the Society meet with the Council of Social Agencies to advise sending representatives to Washington to study the plan.

New members elected were: Dr. John S. Fitzgerald, Dr. Frank G. Leone, Utica; Dr. Charles Kleiman, Marcy State Hospital.

Onondaga County

An epidemic of septic sore throat in Baldwinsville ran for two weeks and claimed 248 victims before the source was traced by Dr. Fred W. Graves to the cow that caused all the trouble.

It was in the "mobile laboratory" operated by Dr. Nelson J. Hohl that the tests were made by which the infected cow was discovered. This laboratory on wheels is equipped with every type of instrument known for testing milk.

For two days Dr. Hohl and Dr. Graves spent their days securing samples of milk and then at night they would pore over them through a microscope.

Samples from 78 cows were examined and it was through these that the infected cow was located.

In describing how cows become affected with mastitis, Dr. Graves said it generally is given the animal by a human being suffering from a cold.

Rockland County

Dr. George A. Leitner, of Piermont, is to be honored by Fordham University on Commencement Day, June 12, by the award of its Golden Jubilee Medal to mark the fiftieth anniversary of his graduation.

Tompkins County

Self-medication, widely practiced with proprietary drugs, was condemned in a talk to the Tompkins County Medical Society at Ithaca on April 16 by Dr. A. H. Aaron of Buffalo, his topic being "Two Thousand Prescriptions."

He pointed out that many commercial remedies are dangerous to health, and that in any event their cost is excessive over what would have to be paid for the same medicines on prescription.

Hospitals can greatly reduce their drug costs, he said, if they will adhere to the United States Pharmacopeia. He cited a certain sedative used in a Buffalo hospital, which, investigation showed, cost 33 times as much as one which is actually more efficient.

The chief danger, he said, lies in the fact that ailing people make their own diagnoses and treat themselves with drugs which, harmless as they may be at first, may bring on serious or fatal results if their use is prolonged. "The people need to be educated on this point," he said.

The speaker pointed out that England has laws which prevent the sale of proprietary drugs without prescription.

Westchester County

The Medical Society of the County of Westchester has initiated steps to incorporate under the State laws. The Society was founded in 1797 and is the second oldest medical society in the United States. It is sixth in size among our County societies and has a larger membership than thirteen State Medical Societies.

THE RESOLUTION of the A.M.A. recommending that all members of the attending staffs of hospitals be members of the County and State Medical Societies and the A.M.A.; has been endorsed by the Comitia Minora of the Westchester County Medical Society and sent to all hospitals in the County. Several already are found to have 100 per cent of their staff members of the society.

General

Cattaraugus County and the Westchester County Health District were jointly awarded first prize in the initial Health Conservation Contest for rural Counties in northeastern United States having full-time health commissioners and assistants, which was sponsored by the United States Chamber of Commerce with the co-operation of the American Public Health Association. Columbia County, N. Y., received an honorable mention.

The data on which the awards were made included the community's record in controlling tuberculosis, diphtheria, and other communicable diseases and reducing deaths therefrom; sanitary supervision of water and milk supplies; school health work; preventive measures such as vaccination and immunization; use of the services of physicians, surgeons, dentists, and nurses; and popular health education.

Similar awards were given in five other sections of the United States. With 105 County and district health units in the country, 16 States were represented in 27 awards. New York, Tennessee, Michigan, and California led with three awards each.

Eight New York State cities received honorable mention in the annual Inter-Chamber City Health Contest: Buffalo, Yonkers, Utica, Schenectady, Binghamton, New Rochelle, Watertown, and Auburn. Syracuse was not eligible to compete this year because it won first prize for two years. However, a special award was granted it.

With 214 cities representing 44 states, Hawaii, and Alaska, entered, there were 40 awards given in the contest. New York State led the country with 9 awards, followed by California with five.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

The Appellate Division Corrects an Injustice

A short time ago your Counsel was successful in obtaining from the Appellate Division of the First Department a unanimous reversal of a judgment obtained by a plaintiff after a jury trial. The verdict of the jury was, in the opinion of your Counsel, a gross miscarriage of justice.

In order to appreciate the ruling of the Appellate Court it is necessary to trace the facts and history of the case in some detail.

The plaintiff, a man in his late twenties, brought an action against four physicians, charging them all with negligence in connection with the treatment of a fracture of the leg. It was claimed in his complaint that the original setting was improper and that thereafter the defendants were negligent in failing to attempt a second reduction when the x-ray pictures disclosed that such a reduction was indicated. The plaintiff claimed as a result of the defendants' negligence that his leg became permanently shortened to the extent of three-quarters of an inch.

The place where the treatment was rendered to the plaintiff was a city hospital and two of the defendants were members of the resident staff. We are not concerned with these doctors inasmuch as the plaintiff conceded at the end of the case that as to them he had not made out a cause of action.

The plaintiff fell down a stairway and injured his right leg on November 4, 1931. He was promptly taken to a New York City hospital in an ambulance after he had received first aid treatment from the ambulance doctor. Shortly after arriving at the hospital an intern examined him and found a fracture of the tibia and fibula. The fracture was described as an oblique beveled fracture. The line of the break was a jagged irregular line. The intern found considerable swelling and extravasation of blood under the tissues, with very painful bruising. He set the leg by manual reduction and placed it in a cast. The same morning after the leg was set, x-ray pictures were taken. The patient was kept under continual observation by members of the house staff.

The defendant, Dr. K., was in charge of the fracture cases on the ward to which the plaintiff was admitted. He was a physician of wide experience in the field of fractures

and his general competency to treat a case of this character could not be questioned.

The second defendant, Dr. M., was director of surgery in the hospital. While he made rounds on the wards in this case, there was no evidence whatever that he ever examined the plaintiff or the x-ray plates, or that he even had discussed the case with Dr. K.

On the morning after the fracture had been set, Dr. K. saw the patient and examined the x-ray plates. It was his opinion that considering the type of fracture a satisfactory reduction had been obtained.

The patient stayed in the hospital from November 4 until December 6. X-rays were taken showing the condition of the fractured leg on November 9, 13, and 26. Dr. K. examined the x-rays from time to time and consulted with the members of the resident staff in charge of the case concerning the treatment of the patient. Upon admission the patient's temperature continued for about nine days and increased on at least one occasion to 103.4°. His pulse went as high as 118 and continued at a rapid rate until December 1. He contracted a sore throat and had some difficulty in breathing and symptoms indicating a general infection at some point in his system. The abrasions on the surface of his leg did not heal until November 24, and even then indications of sepsis were present.

On November 27, after the last x-ray had been taken, the patient was examined by Dr. K. and it was his opinion at that time that as the leg then stood the plaintiff should get a good functional result, but that time alone would tell if he were correct.

Although expressing the desire to go home toward the end of November, the patient was prevailed upon to remain in the hospital until December 6. On that day he was supplied with crutches and advised to return for check-up to the out-patient department of the hospital.

The evidence disclosed that he consulted another physician toward the end of January of the following year. This doctor claimed that at that time his examination disclosed that the plaintiff's leg was "everted, turned out and rotated outward." This doctor advised an open operation with the result that on February 5 the plaintiff was admitted

to another hospital where this physician performed an open operation.

On the trial the issues narrowed down principally to one contention; namely, that the x-ray pictures taken on November 26 disclosed that a second reduction should have been attempted to correct the condition which the plaintiff claimed was clearly shown by the x-ray picture taken on that day.

The plaintiff called as his witness the doctor who performed the open operation and he testified on an assumed set of facts that the defendants had departed from proper and approved practice in failing to attempt a second reduction. This hypothetical question was duly objected to by your Counsel on the ground, among others, that it did not include all the facts in the case and principally that it did not include the plaintiff's general condition while at the hospital. The objection, however, was overruled by the Trial Court.

Although, as we have already said, the record disclosed that Dr. M., who was the director of surgery at the hospital, had nothing to do with this case, nevertheless, the Trial Court sent the issues to the jury as to both defendants and they returned a verdict in favor of the plaintiff. From the judgment entered on that verdict an appeal was taken to the Appellate Division. In a unanimous opinion, not only reversing the judgment, but also dismissing the complaint, the Appellate Court said:

In answer to a hypothetical question, which was duly objected to on the ground that there were no facts contained in it indicating the "man's condition" while he was in the hospital, Dr. X. said: "My opinion is, that improper treatment in the latter two weeks—between the time of the 4th and the 26th—was used." It does not appear that he considered the then existing condition of respondent's leg and his physical condition, at the time he expressed this opinion. He seems to have based his conclusion solely upon an examination of the x-ray plates. He said that he would have removed the cast on November 13, and by manipulation tried to get a better apposition of the fragments. He freely admitted that a manual reduction at that time might have made the situation worse, and even though successful there was no way of telling that the bones would have remained in apposition. In any event he stated that the matter was one of judgment on which some might agree that he was right and others would disagree.

The court went on to say further:

Upon being asked if he [Dr. K.] felt he would have been justified in making any attempts at remanipulating the bones after the x-ray of November 9 was taken, Dr. K. said: "There wouldn't be much prospect of getting

any improvement, even if an anesthetic were given; you might temporarily correct that sliding upward and outward but the hard part would be to hold it after you obtained a correction. That is, no circular cast could be applied to hold it. It has to be applied quite tightly to hold it and the soft part would prevent your doing that. Then the manipulation necessary to reduce that—tissue engorged with blood and a case where the skin was originally infected—he had a boil there, that had to be opened; there was great danger of squeezing that infection into the surrounding tissue and making an abscess perhaps in the deep parts, possibly in the bone; possibly it gets in the blood stream, and you get some trouble in other parts of your body."

Dr. K. further testified: "By moving it, you not only disturb the process of repair which starts as soon as the fracture occurs really; you tear that all apart; you would round off or smooth off the surfaces which always have little indentations on them which fit in and dovetail into the irregular surfaces on the other portion and tend to hold it. By manipulating, those would be smoothed off. Also the blood in the little vessels that would be torn, would be squeezed out; new hemorrhage would occur; also some of these little pieces of matter might be squeezed into the vessel instead of outside; then they would float in the blood stream; that is what is called an 'embolus'; and that floats around until it meets some vessel it can't go through, and according to where that place is, it is a very serious outcome."

Dr. K. was then shown the x-ray taken on November 26. Comparing that with the one taken on the 13th he was asked the following questions, and gave the following answers:

"Q. Now did you find that there had been any change between the 13th and 26th? A. Perhaps just a slight bit more external displacement. Very little thought.

"Q. Now I think this picture, Doctor, we better have on the shadow box. I want you to take 4 and 4-A, doctor. Now, doctor, I want you to tell the jury just what that plate shows (indicating Exhibit 4 on shadow box). A. It shows this oblique or spiral fracture at this point, the lower third of the tibia, with displacement of this, the lower piece with the foot attached to it, outward. They are still engaged there for quite some distance of the fracture surface. There is the line on which this part has slid outward along that oblique line, and has turned outward; it had to come up this way.

"Q. Then, doctor, in your opinion was there sufficient contact between the ends of the bone so that, when you get a callus formation, if instructions had been followed, you would get a functional result even though there might have been some slight deformity? A. Yes. I do.

"Q. Did you believe, doctor, exercising your best judgment as a doctor at that time, that the bones were in sufficient apposition to give a functional result? A. I do."

In its opinion the Court also said:

We do not believe that Dr. K. was guilty of even an error of judgment, considering the

condition of the patient in the failure to reset the leg on the 26th of November. Surely it cannot be said that he failed to exercise reasonable care and diligence. For aught we know, even assuming that nothing happened between the time respondent left the hospital and the date he first consulted Dr. T., an operation of the type he finally submitted to at the latter's hands might have been necessary in any event. It must be borne in mind that Dr. K. was in no way responsible for the fall which respondent suffered. He can only be held to answer for actual malpractice. No competent evidence was offered by respondent to show that Dr. K. did not use the skill and learning of the average physician or that he failed to follow the proper and approved practice in his treatment. On the other hand, Dr. R., a Fellow of the American College of Surgeons, and for thirty-six years attending surgeon at — Hospital, expressed the opinion that the methods pursued by Dr. K. were entirely proper.

The Court found no difficulty in deciding to order a reversal as to Dr. N., saying as follows:

In so far as Dr. N. was concerned, it is rather difficult to understand the theory upon which the case against him was submitted to the jury. The testimony on the trial indicates quite clearly that he did not treat the respondent. As head of his surgical division he made the rounds of the ward; he did not ordinarily examine the patients. He did not read the plates which were taken of respondent's injured leg, nor did he owe any particular duty to him since it appears that the respondent was under the care of Drs. K. and C. [the house physician]. Furthermore, it appears that Dr. K. did not even discuss the case with him.

Negligent Diagnosis

"X," a workman, was injured during the course of his employment and claimed compensation under the Workmen's Compensation Law. The insurance carrier engaged "Y," a physician, to examine "X" to ascertain the extent of his injuries. After examination the doctor reported to the insurance company that the employee was suffering from a loathsome disease, when as a matter of fact, as subsequent examination determined, he was not suffering from any such disease.

Some time later the patient sued the doctor for alleged malpractice claiming that the defendant doctor, carelessly, negligently and unskillfully examined the plaintiff and as a result of such examination arrived at a false diagnosis all to plaintiff's damage.

The case duly came on for trial and at the close of the plaintiff's testimony, a motion was made to dismiss the complaint on the ground that the plaintiff had failed to prove a cause of action. The court in granting this motion to dismiss the complaint stated that even assuming all the

evidence to be true, there could be no liability on the part of the physician because defendant had never been engaged by the plaintiff to treat him, that he never had treated or prescribed for him, and that the full extent of the relationship between the plaintiff and the doctor was one of an examination, and that there can be no malpractice on the part of a physician where there is no treatment. The motion was duly granted and the case dismissed.

Claimed Negligent Delivery

"A," a woman about 21 years old, consulted "B," a physician who specialized in obstetrics and conducted a private sanatorium. She was then about six months pregnant and Dr. B. undertook to attend and care for Mrs. A. and up until she was ready to deliver, at which time she was to go into the private sanatorium, to be delivered.

About three months later, Dr. B. having seen her approximately twice a week in the meantime, received word one night that she was in labor, whereupon he had her taken to his hospital. Upon examination it was disclosed that she was not fully dilated and she remained in the hospital that night and the next day. That evening after the doctor had examined her, which again showed she had not fully dilated, the doctor retired for the night, leaving her in charge of a competent graduate nurse and leaving orders that this woman should be kept on her feet and walk up and down the room. Dr. B. was in an adjoining room where he could be reached immediately.

Suddenly while Mrs. A. was walking up and down her room she started to deliver. The nurse who was present with her all this time, placed her in bed, and the child was delivered spontaneously into the nurse's hands. The nurse called out for Dr. B. who was in the adjoining room and he responded immediately, tied off the cord, expelled the placenta and repaired a slight tear. The child was perfectly normal in every respect, suffering no injury and the mother was discharged from the hospital in the usual ten days.

Subsequently Dr. B. sued for his bill which the patient had refused to pay and a counterclaim was interposed for malpractice claiming that the doctor was negligent and careless in that he was not present at the time of delivery with certain resultant injuries to the mother. The case duly came on for trial and at the close of the case the suit for malpractice was dismissed by the judge and a verdict directed in favor of the doctor for full amount of his bill.

Across the Desk

How MANY times can a man shoot himself through the heart? Once would seem plenty, but a case is reported in the *American Journal of Surgery* (April) where a man in Chicago, destitute and hopelessly ill with pulmonary tuberculosis, fired three bullets from a 25-caliber automatic completely through his heart. He was found in a chair in a tiny closet of a furnished room, with door and window locked inside, no sign of struggle, and the gun where it had fallen from his hand. Nothing to indicate identity was found and the body was buried by the county. The illustration shows clearly two perforations of the right ventricle and one of the left.

Dr. J. J. Kearns, of the Illinois College of Medicine, Coroner's Pathologist of the Cook County Hospital, who reports the case in our excellent surgical contemporary, points out that this instance is not so rare as might be thought. The literature reports numerous penetrating wounds of the heart that were not immediately fatal. One was a case of suicide from ten fatal wounds in the heart and two serious wounds in the neck, all inflicted with a kitchen knife. Another individual survived fifteen minutes following three wounds of the left ventricle and seven in the lung. Probably that is what the French would call a "bad quarter of an hour." Single wounds of the heart, of course, have often proved not mortal. Dr. Fair's article in these pages April 15 treated this subject with a wealth of information. Yet how many people die of a mere scratch or pin-prick.

THE FAMOUS EXPRESSION, "to beat the devil" out of someone, was explained by Dr. James L. Winemiller at a recent meeting of the Manhasset Health Association. It comes from the fact that not many centuries ago it was the popular belief that sick people had devils in them which they attempted to beat out with sticks. He said that the expression "bedlam" is derived from the first insane asylum, "St. Mary's of Bethlehem," established in London in the latter part of the eighteenth century.

BREATHING INTO a paper bag will help prevent seasickness and car-sickness, said a recent medical speaker in Philadelphia. It might be added that the bag will also be in a handy position if the treatment fails.

A MEDICAL JOURNAL out on the Coast refers to the American Association for



Courtesy of American Journal of Surgery

Social Security Bill as the "American A. S. S. Bill," and says, "We like the initials."

THE ACHING QUESTION of "who's crazy now" rises as we read some of the unbalanced, not to say crackpot, stuff in the sensational press. One writer who must have been hard up for copy seized on the report of the number of patients discharged from mental hospitals in this State and wrote in a scare-head, "Five Thousand Madmen Freed Yearly in New York State!" Then he sobbed over the "appalling" thought that since 1927 more than 35,000 idiots, imbeciles, morons, and insane persons have been let out of public and private institutions in the State—"35,000 men and women whose reasoning powers are distorted and in whose brains race the phantasmagoric imaginings of the demented."

It never seemed to cross his fevered mind that mental cases can recover, or improve enough to be better off at home. If he insists that everyone be put in a strait-

jacket "whose reasoning powers are distorted, and in whose brains race the phantasmagoric imaginings of the demented," no doubt he can be taken in at the nearest madhouse.

IT IS NOT infrequent to find in child-guidance clinics that it is not the children who need treatment but the parents who bring them, wisely remarks Dr. Harold A. Pooler of the Binghamton State Hospital, in a recent paper.

A DELICIOUS PIECE of unconscious humor is discovered by the editor of the *Urologic and Cutaneous Review* in a German medical journal, the *Fortschritte der Medizin*, where a Dr. Heinrich Pudor, of Leipzig, discovers that the falling birthrate in Germany is due largely to the Jews. It appears that the Jews throughout the world are slyly conspiring to destroy the Gentiles. They have found they cannot do it by war, so they are now trying to do it by birth-control propaganda. Birth control, he argues, is a sin against the Holy Ghost, against life, against nature, against the blood and the future of mankind. It is of equal significance with murder, for there is nothing more holy than life and the beginning of life. The blackest sin of birth control, however, we find as we read on, is that it will reduce the military strength of Germany to 11.7 million men in 1960, while the strength of Poland will rise to 8.2 million. So this sacred beginning-of-life is to be guarded and nourished for international slaughter! As Confucius, or somebody, said—Can you beat it?

A RATHER CLEVER attempt was made by the Naturopaths and Chiropractors to give themselves legal standing by bills they got introduced in the Oregon legislature. The bills provided for compulsory annual post-graduate courses to be required for annual renewal of their licenses. The Chiropractic bill, indeed, named the required institution for study: the Oregon Chiropractic Association, Inc. Of course it would be hard to keep cultists from practicing a branch of medicine they had been "compelled by law" to study. However, it is reassuring to read that "neither bill caused even the faintest ripple upon the placid waters of the legislative sea, ere it sank never to rise again." A law that did pass, however, makes it compulsory that any practitioner of a branch of the healing art inform the public clearly of the branch of practice or healing cult that he professes to practice. More than this, the act carries penalties for violation of this law. No longer may a cultist hide his lack of fundamental training in the healing art under the general term "doctor."

OUR FRIENDS, the dentists, are also suffering from the growing plague of malpractice suits. The suits are becoming "alarming," and form "one of the gravest dangers to our profession," declares the *Dental Outlook*; and "the largest portion of them, at least 90 per cent, are deliberate attempts on the part of unscrupulous lawyers to build up a case at the expense of our professional abilities and prestiges which suffer to a great extent, even when we are found not guilty in a court of law. And we can obtain no redress."

GOVERNOR LEHMAN signed on April 17 the Byrne-Streit Bill which, among other things, forbids dentists to advertise for patronage "by means of handbills, posters, circulars, stereopticon slides, motion pictures, radio, or newspapers," or to be "in any other way guilty of unprofessional conduct," under penalty of reprimand or loss of license. Only a few days previously, on April 1, the U. S. Supreme Court upheld a rather similar Oregon statute, as told in our May 15 issue, forbidding dentists to advertise prices or claim professional superiority, or to use large display signs, or glaring light signs, or representations of teeth, or to use solicitors or press agents, or to offer free work or free examination or guarantees or painless operation.

A DENTAL MAGAZINE tells of a toplofty young woman who speaks of a rubber dam as elastic profanity, but adds the case of a modern flapper who, when you mention rubber dam, says "you mean the damn rubber."

IN ENGLAND the doctor often dispenses the medicine instead of writing a prescription for the chemist to fill, and the patient feels cheated unless he gets some kind of liquid or pill to swallow. So when nothing is really needed, the doctor has harmless mixtures which he gives out for "moral effect." The London *Lancet* says that "most practitioners who dispense keep a mixture labelled 'ADT': A for any, T for thing, and D for what you like."

FAME AND fortune await the oculist, neurologist, or psychiatrist who can restore the delicate interplay of eye, nerve, and muscle that formerly enabled the mighty Babe Ruth to bring his bat directly on the nose of the twisting, curving, elusive ball, and send it screaming into the stands. Some little thing has gone slightly out of adjustment, and now the whizzing club churns only the empty air. It is a national tragedy of fandom. The scientist who can true up the adjustment again can name his own price and have a bronze statue on Boston Common.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Dietetics for the Clinician. By Milton Arland Bridges, M.D. Second edition, revised. Octavo of 970 pages. Philadelphia, Lea & Febiger, 1935. Cloth, \$10.00.

L'Age Critique (Etude Pathologique et Clinique). By G. Maranon. Octavo of 33 pages. Paris, Felix Alcan, 1934.

X-Ray Interpretation. By H. Cecil H. Bull, M.D. Octavo of 382 pages, illustrated. New York, Oxford University Press, 1935. Cloth, \$7.00.

Herrmannsdorfer-Sauerbruch Diet. By Robert Wollheim and Walter H. Schuinsland, Ph.D. Duodecimo of 68 pages. New York, Professional Service, 1935.

Diseases of the Mouth and Their Treatment: A Text-Book for Practitioners and Students of Medicine and Dentistry. By Herman Prinz, D.D.S., M.D., and Sigmund S. Greenbaum, M.D. Octavo of 602 pages, illustrated. Philadelphia, Lea & Febiger, 1935. Cloth, \$9.00.

The Popular Practice of Fraud. By T. Swann Harding. Octavo of 376 pages. London: New York, Longmans, Green & Co., 1935. Cloth, \$2.50.

REVIEWED

Applied Anatomy. By Gwilym G. Davis, M.D. Ninth Edition. Edited by Geo. P. Muller, M.D. et al. Quarto of 717 pages, illustrated. Philadelphia, J. B. Lippincott [c.1934]. Cloth, \$9.00.

The purpose of this book is to show the construction of the human body considered in relation to its functions, diseases, and injuries.

The fact that this is the ninth edition is its own testimonial to merit and popularity. Completely revised by George P. Muller with the assistance of a half dozen of the outstanding specialists of Philadelphia, the book is guaranteed as to quality by their names. There are many new illustrations among the 674; the numerous colored plates are beautifully done.

In view of the increased interest recently shown in parathyroid surgery the reviewer was delighted to find a good description of the anatomy of the parathyroids accompanied by an excellent illustration in color showing their position and blood supply.

This book, so essentially practical, should

Elementary Human Anatomy Based on Laboratory Studies. By Katharine Sibley. Octavo of 360 pages, illustrated. New York, A. S. Barnes & Co., Inc., 1935. Cloth, \$4.50.

Das Extremitäten-, Thorax- und Partial-Elektrokardiogramm des Menschen: Eine Vergleichende Studie. By Dr. Franz Maximilian Groedel. 2 v., text and atlas. Octavo of 358 pages, illustrated and 200 plates. Dresden: Leipzig, Theodor Steinkopff, 1934. Cloth, geb. RM, 25.00.

Dr. Colwell's Daily Log for Physicians: A Brief, Simple, Accurate Financial Record for the Physician's Desk. By Dr. J. B. Colwell. [New ed.] Octavo. Champaign, Ill., Colwell Publishing Co. [1935]. Cloth.

The Patient and the Weather. By William F. Petersen, M.D., with the assistance of Margaret E. Milliken, S.M. v. 2. Autonomic Dysintegration. Quarto of 530 pages, illustrated. Ann Arbor, Mich., Edwards Brothers, Inc., 1934. Cloth, \$6.50.

Mouth Infection: Clinical Histories. By Oliver T. Osborne. Octavo of 119 pages. New Haven [Oliver T. Osborne], 1934. Cloth, \$2.00.

be of daily value to the active surgeon and also to the medical student who, too often, gropes in a maze trying to discern the important from the unessential.

HENRY F. GRAHAM

Electrocardiography. By Chauncey C. Maher, M.D. Octavo of 250 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$4.00.

In this splendid practical book on electrocardiography, the author devotes space to a simple discussion of the clinical concepts of heart disease, the clinical concepts of the arrhythmias, and uses the nomenclature and classification advised by the American Heart Association. The illustrations are excellent.

There are, however, several statements with which the reviewer could not agree entirely. E.g., in the classification of the arrhythmias, he mentions Stokes-Adams syndrome and uses this term synonymously with auriculoventricular block. The author says that paroxysmal ventricular tachycardia and ventricular flutter are the same. On Page 7

he says: "Rheumatic mitral stenosis does not occur in the heart with syphilitic aortitis." Although there are many such—at least doubtful—statements throughout the book, it is, nevertheless, excellent in that it takes up "Electrocardiography" from a purely clinical aspect.

CHARLES SHOOKHOFF

The B. C. G. Vaccine. By K. Neville Irvine. Octavo of 66 pages. London, Oxford University Press, 1934. Cloth, \$1.75.

In the minds of most physicians the present status of B. C. G. vaccine is not quite clear. This small volume brings all the available knowledge on the subject up to date. A valuable feature is the personal expressions of opinions of investigators in the field. The author's conclusions are extremely conservative and in keeping with his object, that of collecting and publishing established facts. A complete bibliography is included. It is to be sure, an interesting and timely work, and one that should appeal to all who are interested in tuberculosis, particularly its immunological phases.

MAX LEDERER

Synopsis of Genitourinary Diseases. By Austin I. Dodson, M.D. Duodecimo of 275 pages, illustrated. St. Louis, C. V. Mosby, 1934. Cloth, \$3.00.

This little book, designed primarily for the student, is one of the best of its kind that this reviewer has examined. A tremendous amount of information is packed into a small space. Without details the entire subject of genitourinary surgery is portrayed in a clear, concise manner. No attempt is made to describe operative procedures. Well illustrated, it appears a decidedly worthwhile book for handy reference for every general practitioner.

N. P. RATHBUN

Rules for Recovery from Tuberculosis. By Lawrason Brown, M.D. Sixth Edition, Revised. Sexdecimo of 275 pages. Philadelphia, Lea & Febiger, 1934. Cloth, \$1.75.

This is the sixth edition of a book that has been a veritable bible for the tuberculous patient for the past twenty years, at least. Each edition is more complete, more thorough, and more readable than the previous one. This latest edition has chapters on the surgical treatment of the disease, practical hints about the use of vitamins, new data about alcohol and tobacco, the amount of energy expended in various forms of work and exercise, and vaccination of children to prevent tuberculosis, all of which bring the book up abreast to the modern concepts of the treatment of pulmonary tuberculosis.

Though written for the layman, the work

is one in which any practicing physician may find a wealth of valuable and practical information.

FOSTER MURRAY

Nursing Schools Today and Tomorrow. Final Report of the Committee on the Grading of Nursing Schools. Duodecimo of 268 pages. New York, Committee on the Grading of Nursing Schools, 1934. Cloth, \$2.00.

To quote from its opening chapter, this book "summarizes present opinions of the members on certain problems, makes recommendations and suggestions, and raises questions which need further study." It discusses schools of nursing, methods of decreasing the over-supply of nurses and of supplying further educational opportunities, of providing care for undernursed patients, and handling questions of cost.

The study shows that the number of nurses has increased in far greater proportion than has the general population of the United States, and that there are too many nurses with mediocre training and background, too few with specialized training and broad experience. It takes up very fully the question of what a professional nurse should know and do.

Schools of nursing are described as a form of apprentice training, in the majority of which the number of students admitted is still being determined by the number of patients to be nursed. Although there is no national compulsion to raise standards, nevertheless the schools are improving. In many instances students are being replaced by graduates, which, the Committee believe, means better nursing for the patient and more employment for the graduates, even if at lower salaries.

The study treats of essentials for a basic professional school, founded upon eight conditions. It makes many wise recommendations, outlining ways of improvement and progress, and advises closing many of the training schools to stop over-production. It issues the startling statements that "the student nurse is probably the most over-worked student in any profession"; and that "most nurse teachers need better educational preparation." It classifies existing nursing schools under three heads: a few very good ones; a great many mediocre; and a few very poor which should be discontinued. The book also contains useful tables of statistics.

While differences of opinion about the organization of the school of the future may be inevitable, nevertheless the Committee has presented a strong case for reform in showing so plainly the menace of "overproduction and under-education."

MAUDE E. TRUESDALE

THE STERILITY PROBLEM: A STUDY OF 250 CASES

GEZA WEITZNER, M.D.

From the Gynecological Service of Harlem Hospital
NEW YORK CITY

The study of sterility has for its end a three-fold goal: (1) Promotion of impregnation; (2) assurance of the imbedding and growth of the impregnated ovum in the prepared uterine nidus; (3) delivery at term of a normal, viable child. That is the end; its means is a well-founded understanding of the factors involved in conception.

It should be pointed out prefatorily that it is assumed that the ovum and spermatozoon meet in the ampullary portion of the Fallopian tube. With this premise the next step is to explain how these cells arrive at this place and what elements exert an influence upon their meeting.

The spermatozoon—the dynamic or aggressive element in fertilization—is produced by the cells of the testicles. By its own motive power this cell passes through the tubuli contorti of the testicle to the tail of the epididymus; thence, most probably through the peristaltic action of the vas deferens, it traverses that channel to come to rest in the seminal vesicle. An admixture of prostatic secretion lends vitality to the sperm cell and in the course of copulation and ejaculation, the cell along with some millions of its brothers is deposited in the posterior vaginal fornix, the seminal pool. The acid vaginal secretion threatens to be a destroyer of spermatozoa, and for that reason the pause in the seminal pool must be a brief one—at most a few hours.

The alkaline plug of the cervix presents a readily accessible pathway to the

uterine cavity. Kurzrok¹ contends that prostatic fluid dissolves this plug by an enzymic action. By its automotive power, and by, perhaps, a chemotactic force or a hormonal stimulus, the spermatozoon passes through the cervix and uterus to reach the tubal ampulla, on its way overcoming the opposing tubal, ciliary motion. Spermatozoa move swiftly; they traverse in about two days the distance between the seminal pool and the tubal ampulla (Hohne and Behne).² They do not linger in the ampullary zone of the tube, nor do they wait for a late ovum. If the ovum is not present, the spermatozoa proceed to a foredestined death. From the ampulla out through the fimbriated end of the tube, they make their way to the peritoneal cavity. Within a few hours of the accession to the free peritoneum, phagocytes destroy the cells.

Traveling a shorter road, but consuming approximately two days from the time of exit from the Graafian follicle, the ovum reaches the ampullary zone. This is in accord with Grosser³ and Sellheim.⁴ Schroeder⁵ allots six days' life to the ovum and Fraenkel⁶ allots ten days'. Kurzrok gives only a very short time for the viability of the female germ. The female ovum is a static factor, a passive element, progressing through the impetus granted by ciliary action and tubal peristalsis. The ovum will not wait for impregnation, the locomotive factors being constantly effective.

Thus two days must be allowed for the sperm to reach the ampullary zone; the

ovum requires two days to come to rendezvous. If fertilization takes place tubal passage continues for ten days and allocation of the nidus requires four days. Thus sixteen days are consumed from the time of ovulation until the imbedding of the impregnated ovum in the uterus (Grosser, Sellheim.⁷ It is a generally accepted fact that millions of spermatozoa are deposited in the female genital tract at any given time. It is assumed likewise that but one ovum, passively but constantly moving from its birthplace toward the external world, is available every 28 days. This paucity of the female cells is a factor militating against the occurrence of impregnation.

It has been intimated that to provide the greatest chance for impregnation, ovulation and ejaculation should be simultaneous, and here arises the problem of "provoked ovulation."

In venturing a definition of provoked ovulation and in elucidating the detail of such ovulation, Sellheim chooses an imaginative analogy:

Consider a fruit tree which periodically bears a crop providentially clinging to the branches until ripeness and gravity cause it to fall to the ground. It is no great feat to imagine such fruit being prematurely separated by angry winds, and everyone has seen fruit linger beyond ripeness, passing to rot and waste. Wise planters know when fruits attain ripeness and where Nature fails to effect a separation of the ripe product, such planters pass through their orchards and shake from the branches the tardy fruit. Perhaps the ripening ovum leaves the follicle prematurely or lingers past the time of ripening.

If one could provoke ovulation, then the possibility of impregnating the resulting ovum would be enhanced. The possibility of provoked ovulation is inviting and there is evidence pointing toward such an hypothesis. Copulation at, or approximating the time of ovulation, might provide this provoking factor. The exact time of ovulation is as yet not clearly defined. Patients often complain of pain occurring midway between periods, accompanied by slight bleeding (Mittelschmerz). Does ovulation occur at that time? Sellheim and Grosser place ovulation on the eighth postmenstrual day, R. Meyer⁸ on the seventeenth day,

Schroeder on the fifteenth day, Fraenkel on the eighteenth day. Knaus⁹ and Ogino¹⁰ place ovulation at fourteen days previous to the onset of the next menstrual flux. While opinions are so divergent concerning the time of the ovulation in the human, Hartman¹¹ has shown that monkeys ovulate practically the same time every month between the ninth and seventeenth days after menstruation.

After the previously described two agents and the mechanism of the fertilization have been set down as a basis, the factors which may cause sterility can then be divided into five groups:

1. SPERMATOGENIC STERILITY: (a) absent sperm cells; (b) defective sperm cells.
2. OVOGENIC STERILITY: (a) absent ova; (b) defective ova.
3. STERILITY OF TRANSPORTATION: (a) anatomical; (b) functional.
4. STERILITY OF IMPREGNATION (low fertility).
5. NIDATION STERILITY: (a) fetal; (b) maternal (tubal and uterine).

Spermatogenic Sterility

The spermatozoa should be carefully studied. Their motility, head, tail, size, and relative number accurately noted. At present, Moench's¹² suggestions are followed with regard to the number of abnormal forms. He considers up to 20 per cent of abnormalities as within normal limits; 20 per cent of abnormal forms indicate an impaired fertility; and over 25 per cent of abnormal forms suggest clinical sterility.

Ovogenic Sterility

It is impossible to study ova directly. The chief source of knowledge concerning such cells is the menstrual history. It is assumed that menstruation indicates a preceding ovulation but it is admitted that ovulation may occur without menstruation. Recent studies of the sex hormone, content of urine, and blood serum have added some slight information to this subject.

Transportation Sterility

The anatomical type of transportation sterility is the result of impaired cell motility or where mechanical or functional obstacles prevent the passage of the ovum.

Considering only the female tract, faulty development or acquired deformity of vulva or vagina and vaginismus—also pathological vaginal secretions—may prevent ascendance of spermatozoa. Developmental defects or inflammatory alterations in the cervix, uterine cavity, and in the Fallopian tubes are the causes underlying cervical, uterine, and tubal obstruction.

In the "functional" type of transportation sterility, absent or diminished tubal peristalsis or diminished ciliary action may interfere with the transportation of the ovum. This is detected with great difficulty. Recent kymographic studies of Rubin¹⁵ may help demonstrate tubal peristalsis.

Impregnation Sterility

Impregnation sterility (or low fertility) exists or is easily conjectured. Innate biologic incompatibility between sperm and ovum must exist. Cases of sterile couples who are fecund after new mating are legion. This fertility is explainable only on assumption that incompatibility is a real factor.

Nidation Sterility

We have no proof that every impregnated ovum will implant itself in the prepared nidus. From the moment of impregnation ten days pass before the ovum reaches the uterine cavity. In that period of time an ovum whose development is irregular or retarded may well perish. In the ten days' journey, a rapidly growing ovum may find its passage obstructed by a patent tube. A rapidly and uniformly growing ovum may be forced to implant itself in the tube wall. Thus the ovum, by growth potency, may be a factor in the occurrence of tubal gestation.

Finally, the impregnated ovum on reaching the uterine cavity may find a defective decidua awaiting it. The hormonal play upon the endometrium may be in disharmony, and thus an inadequate preparation results. The impregnated ovum attaching itself to a faulty decidua, may perish either immediately or within a few weeks (habitual abortion).

The following is a description of the methods of diagnosis and treatment of sterility as it is practiced at the Sterility

Clinic of Harlem Hospital. The results are noted and compared with other available reports published by the various authors.

The primary condition for admission to the clinic is a sterility of at least one year's duration in spite of normal sex life and a desire for children.

On admission, the patients are divided into three clinical groups: (1) Primary sterility (without any previous pregnancy), (2) secondary sterility (with at least one previous pregnancy), (3) infertility (with several spontaneous previous unfinished pregnancies).

A careful history is taken, covering especially the husband and the sex act. This is followed by

1 Physical and gynecological examination

- a Patients with gross pathology which may be without a doubt the cause of sterility, e.g., tumors, bilateral pyosalpinxes, mal-developments, are recommended to the ward for necessary treatment.
- b Patients with general diseases, e.g., metabolic blood heart, lungs, and so on, which contraindicate pregnancies or which would be aggravated by future gestations, are referred to the corresponding departments for treatment and consultation.
- c Patients with no gross pathologies, no constitutional organic or specific diseases are subjected to further examinations. (Note: Lues is not considered a contraindication and the sterility study and the antiluetic treatments proceed simultaneously.)

2 Examination of the vaginal secretion

- a For acidity.
- b For bacteriological cleanliness (relation between bacilli and pathogenic germs and pus cells).

3 Examination of the cervical secretion

- a For gonococci.
- b For viscosity.

4 Huehner Test¹⁶ Microscopical examination of the vaginal and cervical secretions for living spermatozoa immediately or within one hour after cohabitation.

5 Condon Test Microscopical examination of the spermium for living spermatozoa (Huehner test is preferable since condoms often destroy spermatozoa). (Withdrawal is now being done with collection of the specimen in a clean wide mouthed bottle).

6 Rubin Tests

- a Using 200 mm pressure

- b. Using 200 mm. pressure after administration of atropin 1/150 gr. t.i.d. on the previous day and after correction of eventual malposition.

7. *Lipiodol Injection:*

- a. Pictures taken immediately after injection.
- b. Pictures taken 24 hours after injection.

Treatment

The treatment of sterility is chiefly symptomatic. Absolute causes of sterility are few. We see vague, relative, or contributory causes which singly or in combination affect sterility. Diagnosis must ferret out each of these causes in order to ascertain the value of therapy or medication.

The correction of the female hygiene and regulation of the sexual act may constitute in some cases the most efficient means of therapy. On the first visit the patients are advised to douche with alkaline solution (two tablespoonsful of sodium bicarbonate to a quart of warm water) previous to intercourse to eliminate, if possible, the spermaticidal, acid, vaginal secretion. Intercourse is advocated around the fourteenth day previous to the next menstruation period. Intercourse is limited; the act being indulged in but twice a week. This last restriction is important in light of the fact that there is definite evidence suggesting that spermatotoxic substances may develop in response to a too copious supply of spermatozoa. Baskin¹⁵ in Denver claims that he is able to immunize patients against impregnation by three properly spaced intramuscular injections of semen. It has been noted also that after two frequent ejaculations the viability and number of the spermatozoa in the spermium is considerably diminished.

Endocervicitis and associated inflammatory changes in the cervical canal and portio are treated by coagulation and cold spark applications. These methods have given the most satisfactory results.

Where there is a tubal obstruction various weapons of attack are at hand. Insufflation and intrauterine injections have only few contraindications and few sequelae. In the author's clinic insufflation is first routinely employed, and is found an effective, rapid, and inexpen-

sive method. Of course, it is borne in mind that the tube open to air may be absolutely closed to spermatozoa and ova. Again, insufflation gives no inkling as to the location of obstruction. Injections of opaque substances in the uterus will overcome both these objections. It is essential that both these methods be repeated frequently if patency is to be proven. In those cases which are apparently obstructed atropine is used orally and hypodermatically to rule out the possibility of spasmodic, tetanic contraction of the tubal isthmus. Tubal obstructions have been repeatedly found which were relieved spontaneously. No cause for this can be assigned.

Three operative procedures are available for the relief of tubal obstruction. The first is directed toward reopening the closed, fimbriated extremity; in the second, the isthmus portion of the tube is excised and the patent tube is implanted in the uterus. In the third procedure, the ovary is transplanted into the uterine cavity. This last is employed where the entire tube is obstructed.

Regarding the results in reconstructive surgery, the most enthusiastic reports were published very recently by Holden and Sovak,¹⁶ in their ten operated cases, seven patients terminated with patent tubes, two became pregnant. Estes¹⁷ with his ovary implantations in the uterine cavity reports conception in 8 per cent of all cases. On the other hand, several gynecologists have a score of reopened tubes under observation without a single pregnancy thereafter. Owing to the low percentage of successes in tubal reconstructions, surgery is rarely advised.

Results

During the last three years over 250 patients have been admitted to the clinic. 43 per cent with primary sterility; 55 per cent with secondary sterility; and 2 per cent with the clinical classification, infertility. Of these patients, 94 per cent were colored.

In the course of observation and treatment, where the Huehner Test was performed, the cervical secretion yielded living spermatozoa in 46 per cent. Of the condom specimens, 94 per cent contained spermatozoa. Only 6 per cent

had an aspermia. The differentiation between normal and abnormal forms has been adopted only lately, hence percentages cannot be given in this report. Of the cases Wassermann reaction was positive in 32.5 per cent.

Closed tubes were found on the first insufflation in 38 per cent of the cases; after the second insufflation this number was reduced to 27 per cent; after Lipiodol injection this number was further reduced to 13 per cent. It should be remembered that all patients with gross pathology had already been ruled out.

Rubin¹⁸ in his 2,192 cases reports: 26.1 per cent non-patent tubes, 43.2 per cent normal patencies, 4.7 per cent spasmodic patencies, 26 per cent strictured patencies with peritubal adhesions.

A. Mayer¹⁹ reported 17 per cent non-patent tubes in primary sterility, 14 per cent in secondary sterility.

End results in the completed cases in the author's clinic showed 25 per cent conceptions. This compares favorably with Rubin's 19 per cent. Brooke and

Anspach²⁰ report 32.2 per cent conceptions. Polak²¹ in 1916 reported 31.1 per cent. Hunner and Warton²² in 1924 had 25 per cent pregnancies in selected cases. Dickinson and Cary²³ in 1927 had 46 per cent pregnancies. Macomber and Reynolds²⁴ in 1928 had 29.4 per cent conceptions with 25 per cent full-term deliveries. Dickinson states that sterile marriages in the hands of an efficient gynecologist have a 1 to 3 chance for conception with patent tubes and a 1 to 7 chance with closed tubes. Statistics from the author's clinic show that the chance applied to all cases is 1 to 4.

It is generally acknowledged that approximately 20 per cent of sterilities disappear upon suggestion of simple proconceptive advice. Adequate and proper treatment will add some 5 or 10 per cent to that figure. This small addition is not particularly gratifying but it indicates that much can be learned and detected still if the study of sterility is to be elevated to the standard it deserves.

2715 GRAND CONCOURSE

References

1. Kurzrok, R., and Miller, E. G., Jr.: *Am. J. Obst. & Gyn.* 24-19, 1932.
2. Hohne and Behne: *Zentralbl. f. Gyn.* 1914. No. 1.
3. Grosser, O.: *Zentralbl. f. Gyn.* 56:705, 1932.
4. Sellheim, H.: *Med. Klinik.* 1923. No. 46-48.
5. Schroeder, R.: *Lehrb. der Gyn.* Leipzig, 1922.
6. Fraenkel, L.: Halban and Seitz: *Biol. and Path. des Weibes*, 1924. Vol. I.
7. Sellheim, H.: *Jahreskurse f. Arztl. Fortbildg.* 1927. July.
8. Meyer, R.: *Arch. f. Gyn.* Vol. 100.
9. Knaus, H.: *Zentralbl. f. Gyn.* 151:302, 1932.
10. Ogino, K.: *Zentralbl. f. Gyn.* 56:721, 1932.
11. Hartman: In *Sex and Internal Secretion*, by E. Allen, 1932.
12. Moench, G. L., and Holt, H.: *Am. J. Obst. & Gyn.* 22:199, 1931.
13. Rubin, I. C.: *J.A.M.A.* 90:99, 1928.
14. Huehner, M.: *Sterility in the Male and Female*, Rebman Co., 1913.
15. Baskin, M. J.: *Am. J. Obst. & Gyn.* 26:892, 1932.
16. Holden, Sovak: *Am. J. Obst. & Gyn.* 24:684, 1932.
17. Estes: *Med. Times* 1:132, 1922.
18. Rubin, I. C.: *Am. J. Obst. & Gyn.* 24:561, 1932.
19. Mayer, A.: *Muench. Med. W'chsch.* 76:1627, 1929.
20. Brooke, Anspach: *Am. J. Obst. & Gyn.* 19:1, 1930.
21. Polak, J. O.: *Surg. Gyn. & Obst.* 23:261, 1916.
22. Hunner, Warton: *South. M. J.* 17:269, 1924.
23. Dickinson, Cary: *J.A.M.A.* 88:1, 1927.
24. Macomber, D.: *Am. J. Obst. & Gyn.* 17:621, 1929.

CARBON MONOXIDE IN CLOSED CARS

The true cause of many mysterious automobile accidents may be the seepage of carbon monoxide into the interior of the car, according to an investigation reported in *Health News*. Over nine-tenths of the cars and drivers figuring in accidents have no defects that would account for them.

Autos frequently leave the road, often in broad daylight, for no explainable reason. There have also been many accounts of

automobiles which, with a clear road ahead, have suddenly veered toward the left side of the pavement and crashed into cars coming from the opposite direction. The frequency of such reports has brought up the question whether carbon monoxide might not be responsible, for it is odorless, tasteless, colorless, and even in small amounts quickly causes unconsciousness in closed spaces.

GLOMUS TUMOR

A Brief Clinical Study of the Glomus Angio-Myo-Neurome Artériel of Barré and Masson

MICHAEL S. BURMAN, M.D., AND A. M. GOLD, M.D.

*From the Hospital for Joint Diseases, the Service of Dr. Leo Mayer
NEW YORK CITY*

The glomus tumor manifests itself as a small, very painful, bluish, subcutaneous nodule, whose identity has been clinically and histologically re-established through the work of Barré and Masson.¹ Its previous inclusion in the more heterogeneous class of painful subcutaneous tubercle masked its primary clinical identity. Two recent papers in American medical literature have served to acquaint us with its essential details. Adair² has pointed out its salient clinical features in a study of ten cases observed at the Memorial Hospital from 1929 to 1934. Mason's paper,³ published almost at the same time, reports one new case and is particularly valuable because of the careful study of the literature and because of its excellent histological study of the tumor. Mayer and Raisman⁴ have observed three cases and their paper is to be published in the *Archives of Surgery*.

The thing that brings the patient to the clinic or office is *agonizing pain*, which is brought on usually by a mild trauma, in the noted or unnoted presence of a small, subcutaneous nodule, apparently the source of the pain. Its size is measured in millimeters (four to ten millimeters as a rule). It is slightly elevated. It is bluish in color but its coloration is phantom in character, so that the surgeon may be uncertain of the exact location of the tumor. This is an important point in the operative removal of the tumor, since its color will be further masked by iodine, mercurochrome, or any other colored antiseptic, applied to the skin at the time of operation. It should be carefully marked out beforehand. Thermal changes and pressure alter the bluish color of the tumor. On attempted palpation of the tumor, a painful crisis is set up which is enough to make the patient cry with agony. Nor is palpation the only necessary form of pressure to do this. The patient will exert every effort to prevent any form of touch contact, even of simple

clothing pressure, with the tumor. The pain once set up quickly subsides. During its presence, it is very sharp, radiating, and almost unendurable. The location of the tumor is invariably on an extremity. It has never been seen on the trunk. It is always single, except in the one instance reported by Adair.

These are then the diagnostic points which should make the tumor easy of recognition—a *small, bluish, subcutaneous tumor, located on an extremity, accompanied by attacks of excruciating pain on tumor contact*. Let it not be mistaken for a thrombosed varix, a hemangioma, or a neuroma or neurofibroma.

The tumor is uncommon and only about 41 cases under the designation of glomus tumor have been recorded. Both sexes are evenly involved. Trauma may or may not precede the onset of the tumor. The glomus tumor has a predilection for the middle decades of life and most patients are over 30 years of age. The duration period of the tumor is long, and in Adair's series, it averaged 9 years. No other tumor, or any other pathologic condition, such as Horner's syndrome, is constantly associated with it.

Simple excision of the tumor completely relieves the patient. When it is located subungually, and this location is not uncommon, it is not necessary to amputate the phalanx. Peri-arterial sympathectomy does not relieve the pain of the tumor. The application of radium plaques does not lessen the size of the tumor nor relieve pain. It is an interesting point, which has been our experience as well as that of others, that an excessive amount of novocain is needed to anesthetize the region of the tumor. In one of our patients, novocain was injected into the region of the tumor to deaden the painful crisis which had arisen from the palpation of examination. The patient was immediately relieved and the effect persisted for several hours. The tumor does not

metastasize and once removed does not recur.

The histologic nature of the glomus tumor was adequately revealed by Masson and its kinship with the *glomus coccygeum* indicated. It is a derivative of the normal glomus structure—a neuro-myo-arterial glomus—of the subungual tissues or of the subcutaneous tissues of the extremities. According to Mason, "these formations represent a venous-arterial anastomosis, which is characterized by the presence of large epithelioid cells replacing the media of the vessels." These epithelioid cells are not contractile, do not form smooth muscle fibers, and are embryonic rests of angioblasts. The function of the normal glomus body is not known, and various theories suggest that it maintains a constant capillary pressure, that it acts in the maintenance of local temperature, and that it regulates interstitial pressure under the action of the Pacinian corpuscles.

The tumor is composed of bloodvessels of varying sizes, which give it an angiomatous appearance. The vessel walls do not contain the typical smooth muscle architecture but are instead replaced by epithelioid cells, whose nuclei are spherical and dark and whose cytoplasm is indistinct in staining. Smooth muscle fibers may follow the endothelial lining of the vessels or may intermingle with the epithelioid cells. Numerous myelinated and unmyelinated nerve fibers enter the tumor and surround the vessel walls in a loose connective tissue. The nervous elements are considered to be essential parts of the tumor.

No glomus tumor has been reported in association with the *glomus coccygeum* and it is rational to suppose that certain cases of coccygodynia may be due to such a cause. This has yet to be demonstrated.

(A perithelioma of the *glomus coccygeum* has been described by Hillelsolm [*Ein Peritheliom des Glomus Kokzygeum*, Inaug.—Dissert., Univ. z. Königsberg, 1911. Memel. Published by F. W. Siebert]. This tumor occurred in a woman of 47 and only occasioned slight pain. He reviews the literature.)

Report of Cases

CASE I. Andrew L., a man of 62, was first seen in the out-patient department on

September 4, 1934. The patient had noted a small painful nodule just below and to the outer side of his right knee ever since he had worked in a brewery in 1919. There was no definite history of injury. The tumor was painful in rainy weather, and intermittent pain was experienced on sitting or walking too long. In a painful crisis, such as on pressure of clothing or on other touch, the pains were sharp, darting, and radiated up the thigh. The nodule had not increased in size. The patient had received no treatment at any time. No other member of the family had a similar condition. The demonstration of the typical small, bluish subcutaneous nodule about four millimeters in size, which on palpation gave severe pain, gave the diagnosis of glomus tumor. The tumor was removed on September 12, 1934, under 2 per cent novocain anesthesia, an unusual amount of solution being needed. Recovery was uneventful. Microscopic examination of the tumor sections confirmed the diagnosis. Some sensitiveness remained for several days but this disappeared gradually without recurrence of pain.

CASE II. Mrs. Mary B., aged 45, was first seen on February 15, 1934, because of severe pain on the inner side of her left knee. There was no trauma. The pain had been present for a month and she had noticed only very recently a small bluish spot on the inner and upper side of her knee. The pain was severe enough to keep the patient awake at night. It interfered with walking and was in general most distressing to her. Examination showed a bluish, pea-sized nodule in the area of the knee indicated. It was exquisitely tender to touch, moderate pressure being agonizing. The peculiar feature of the mass was its elusiveness. It was difficult to localize the tumor on some occasions. The bluish color of the tumor was not constant. Only the use of the finger in palpation indicated definitely the site of the tumor. Two per cent novocain was injected into the region of the tumor to relieve the excruciating pain caused by palpation. The tumor was soon painless and withstood strong finger pressure. A diagnosis of painful neurofibroma was first made and later altered to that of glomus tumor. The region of the tumor was explored under local anesthesia the next day. No tumor was felt or seen in the subcutaneous tissues. The deeper layers of the skin showed some thickening at one point with some bluish discoloration. This piece of skin was excised and showed mild acute inflammation on section. The patient developed an erysipeloid reaction about the wound which cleared up quickly. The

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CLINICAL SPECTROSCOPY

The Quantitative Distribution of Lead in the Body or Its Physiopathologic Retention as a Reciprocal of the Capillary System

L EDWARD GAUL, M D, AND A H STAUD, B S

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NEW YORK CITY

A dictum for lead in the body has been its storage in the bones. Chemical analysis placed it there. A spectrographic analysis has proved the distribution of lead in the body as a reciprocal of the capillary system. By the latter is meant an apportionment of lead or any other metal whose chemical and physical properties account for their colloidal behavior in the sera, about the capillary network of the vascular system. The reciprocity between the capillary and the metallic distribution is classically illustrated by histological studies of argyrosis.

Owing to its chemical and physical properties, silver, when absorbed or given intravenously, produces a natural and selective staining of all tissues and organs. The distribution and localization of silver around the capillaries has furnished a composite picture serving to interpret the term, metallic retention.¹

Disregarding the mode of entry into the lymph or bloodstreams, the dispensation of a metal is considered a function of its chemical and physical properties. Where its biochemical state is colloidal, whether absorbed as an extraneous contamination or administered therapeutically, the retention, localization, and excretion has been ascribed to the physiologic rôle of cellular elements.^{2,4}

Metallic retention is the physiopathologic disposition of metallic elements around the capillaries of the blood vascular system. The interrelation between capillary and metallic distribution while portraying the vastness of the area for the retention by the body of metallic constituents also places the metals whose ions may be highly toxic to protoplasm, contiguous to the cellular elements of vital organs and tissues. If one regards the normal physiochemical equilibria reactions of connective tissue as one would explain a previously balanced solution in a testtube becoming unbalanced by add-

ing an ion or ions that have altered its chemical reactions apparent as a precipitate, the biochemical effects of a metallic retention are easily apprehended.

An encumbrance of the normal equilibria reactions of the body by the absorption of extraneous metallic elements or further the release of toxic ions by changes in the pH of the tissues, will obviously produce pathological changes in the capillary endothelium and tissue spaces which secondarily will affect the normal function of neighboring structures. This interpretation not only signalizes the potential magnitude of the area for pathological changes, but also invites a new concept concerning the rôle of metallic ions in the causation of signs and symptoms characteristic of a disease process.

After establishing the feasibility of a biospectrometric* analysis for determining the quantitative lead retention in cases of plumbism which was recently reported,⁵ the next step was to prove the distribution of this element in the body spectrographically. Previously it was shown that the blood would give false values whereas the cutis or connective tissue would give an accurate index as to the quantity of lead retained. Blumberg and Carey⁶ recently confirmed these findings in a study of argyremia. Another interesting fact in this respect proved that regardless of the cutaneous site—arm, leg, thigh, chest or flank—the quantitative lead retention could be estimated. Likewise, where several biopsy specimens—arm, and leg—were obtained from the same case, the respective samples showed

*The word biospectrometric specifies a quantitative spectrographic analysis for the metallic constituents in differentiated and undifferentiated mesoderm, obtained by taking a dermal biopsy specimen with a 3/16 inch (0.47 cm) punch the specimen weighing approximately 0.025 gm.

an equal quantity of lead, proving the uniform distribution in the cutis.

The purport of the spectrographic data shown in the accompanying table establishes a corollary to a biospectrometric analysis; i.e., in determining the quantity of lead present in a biopsy specimen, one determines the quantitative retention for that element throughout the various organs and tissues of the body. Where there is a proportionate density of other metallic lines in the biospectrograms,⁷ such as gold,⁸ nickel,⁹ copper, aluminum, zinc, tin,¹⁰ and lead, to the density of the silver line which is histologically visible due to its chemical and physical properties providing its retention is sufficiently high, it proves a similar quantitative retention of the above metals in the body but due to their chemical and physical properties are histologically invisible regardless of the quantity present. When suitable staining technics are developed for them, a similar distribution and localization will be shown histologically as established biospectrometrically.

Comments

The physiology of the cellular elements affecting the distribution of lead as a reciprocal of the capillary system as well as its excretion merely serves to interpret and focalize a phase of this investigation on the pathological importance of a lead retention. Knowing that lead is retained around the capillary system as a quantitative variant and aware that changes in its solubility will release ions highly toxic to protoplasm, the factors affecting the solubility will be considered briefly.

Aub, Fairhall, Minot, and Reznikoff,¹¹ believe that lead is probably present in the body as colloidal tertiary lead phosphate, which is very sensitive to changes in the hydrogen-ion concentration and may be an important factor in the frequent development of an acute lead intoxication following infections or acidosis. In a later publication¹² he states that it has been easier to control the metabolism of lead in the human organism since it was learned that the lead stream runs parallel to the calcium stream. While all the factors affecting calcium metabolism are too numerous to mention a few will serve as examples—pregnancy and lactation, acute attacks of

indigestion, anorexia, gastrointestinal surgery, alcoholic debaucheries, vomiting, diarrhea, constipation and reducing diets.¹³

Any fever-inducing agent, acute or chronic due to bacterial or physical

TABLE
*Quantitative Distribution of Lead in the Body**

Samples analyzed	Quantity of lead in grams†
Skin—abdomen	0.03
Bone	
Rib—left ninth	
Cortex	0.03
Medulla	0.06
Temporal	0.05
Vertebra—dorsal twelfth	
Cortex	0.03
Medulla	0.06
Liver	0.02
Kidney—left	
Cortex	0.03
Medulla	0.02
Bladder	0.05
Spleen	
Cortex	0.03
Medulla	0.02
Muscle	
Abdominal	0.03
Heart—left ventricle.....	0.01
Longus coli	0.03
Ovary	0.02
Adrenal—left	0.03
Esophagus	0.02
Stomach	0.03
Small intestine	0.02
Large intestine.....	0.03
Gallbladder	0.05
Ear—left	
Labyrinth	0.03
Ossicles	0.03
Frontal sinus	
Membrane	0.03
Brain	
Cerebral cortex—left.....	0.02
Cervical cord.....	0.02
Optic nerve	0.02
Trachea—cartilage	0.02
Lung—left	
Apex	0.04
Base	0.04
Lymph node—cervical.....	0.04
Sacral nerve	0.02
Fascia—thigh	0.03

* Autopsy material—was obtained from the fresh tissue with a carbon steel punch, 0.47 cm. and analyzed under identical physical conditions. An analysis of three additional complete autopsy samples gave the following quantitative retention for lead, 0.04 grams; 0.08 grams; and 0.01 grams.

† 0.03 grams equals 0.00000003 grams.
0.04 grams equals 0.00000004 grams.
0.08 grams equals 0.00000008 grams.
0.01 grams equals 0.00000001 grams.

agents likewise affects the solubility, which is further accentuated by a concomitant disturbance in the calcium metabolism. Any acute or chronic infectious process irrespective of the site or severity tends not only to mobilize colloidal metals to the point of infection but also induces a low grade toxemia. Other factors which must be considered are general or local anesthetics, surgical operations and injuries. These predisposing agents noted in the anamnesis are common parlance to every physician.

At this time an interpretation of the etiological significance of a quantitative lead retention or any other of the metals being retained by the body either alone or in combination which has been demonstrated biospectrometrically would merely exemplify a type of professional blundering. The signs and symptoms of a metallic retention or poisoning have been classified as those of excretion or retention. The excretory manifestations of a metallic retention will include symptomatic and pathological changes affecting the respiratory tract—an acute bronchitis may follow metal therapy, mouth and gastrointestinal tract—the metallic taste, the gingival metal-line, aphthous ulcerations and the familiar colic of metal poisonings, and the genitourinary tract—metallic nephritis is not uncommon. An

answer to the question concerning the etiological rôle of a metallic retention has been a metal-free dietary régime and demetalization medication. Clinical improvement following this therapy has supplied the initiative for a closer inquiry as to sources of metallic intake and more effective medication to bring about an excretion.

Conclusions

(1) Lead is not deposited in the bones of the body but distributed as a reciprocal of the capillary system.

(2) The distribution of silver as seen histologically has been accepted as a classical illustration of what is meant by metallic retention.

(3) Metallic retention is the physiopathologic disposition of metallic elements around the capillaries of the blood vascular system.

(4) The factors affecting the solubility of a quantitative lead retention were considered.

(5) A corollary for a biospectrometric analysis has been established, since in determining the quantity of lead in a biopsy specimen one determines the quantitative retention for that element throughout the various tissues and organs of the body.

100 WEST 59TH STREET

References

- 1 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, the quantitative distribution of silver in the body or its physiopathologic retention as a reciprocal of the capillary system (To be published in *Arch. Derm. and Syph.*)
- 2 Gaul, L. E. and Staud, A. H. Clinical Spectroscopy, the quantitative distribution of gold in the body or its physiopathologic retention as a reciprocal of the capillary system (To be published in *Arch. Derm. and Syph.*)
- 3 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, a study of biopsy material from patients who had received intravenous injections of silver arsenophamine, *Arch. of Derm. and Syph.* 30 433, 1934.
- 4 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, seventy cases of generalized argyrosis following organic and colloidal silver medication including a biospectrometric analysis of ten cases *J.A.M.A.* 104 1387 1935.
- 5 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, a spectrometric analysis of biopsy specimens obtained from cases of plumbism and workmen in daily contact with lead paint *Jour. of Nerv. and Ment. Dis.* 81 265, 1935.
- 6 Blumberg, H., and Carey, T. N. Argýremia detection of unsuspected and obscure argyria by the spectrographic demonstration of high blood silver, *J.A.M.A.* 103 1521, 1934.
- 7 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, the advantages and physical principles of the spectrograph with the technic for taking the biopsy specimen for a biospectrometric analysis (To be published in *Arch. of Derm. and Syph.*)
- 8 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, a study of biopsy material taken from patients receiving gold sodium thiosulphate, *Arch. of Derm. and Syph.* 28 790, 1933.
- 9 Gaul, L. E., and Staud, A. H. Clinical Spectroscopy, the quantitative retention of nickel in psoriasis *Arch. of Derm. and Syph.* 30 697, 1934.
- 10 Unpublished.
- 11 Aub, J. C., Fairhall, L. T., Minot, A. S., and Reznikoff, P. Lead Poisoning, *Medicine* 4 1 1925.
- 12 Aub, J. C., Robb, G. P., and Rossmersl, G. Significance of Bone Trabeculae in the Treatment of Plumbism *Am. J. Pub. Health* 22 825 1932.
- 13 Cone, W., Russell, C., and Harwood, R. U. Lead as a Possible Cause of Multiple Sclerosis, *Arch. Neur. & Psych.* 31 236 1934.

HOUSE OF DELEGATES

MINUTES OF ANNUAL MEETING

May 13 and 14, 1935

The 129th Annual Meeting of the House of Delegates of the Medical Society of the State of New York was held at the Ten Eyck Hotel, Albany, New York, on Monday, May 13, 1935, at 10:00 A.M.

Dr. Samuel J. Kopetzky, Speaker; Dr. Daniel S. Dougherty, Secretary.

THE SPEAKER: The House of Delegates will please come to order.

1. Committee on Credentials

THE SPEAKER: The first order of business is the report of the Committee on Credentials.

THE SECRETARY: The Committee on Credentials finds no disputed delegations, and all those whose names are on our roll are entitled to vote.

THE SPEAKER: The next order of business is calling the roll.

THE SECRETARY called the roll by Counties.

THE SPEAKER: A quorum being present, we will proceed with the business of the House.

2. Wendell C. Phillips, M.D.

THE SPEAKER: There is no more fitting way to open the session than to think of those in our ranks who, since our last session, have passed on. I ask the House of Delegates in their memory to rise.

There was one among us who was never absent. He held high rank here and in the American Medical Association. I am going to ask Dr. Van Etten to say a word in commemoration of our leader who has passed on.

DR. VAN ETEN: Wendell Christopher Phillips, a "gentleman and a physician," was the text of a eulogy delivered by the Reverend Doctor Fosdick, on the occasion of his obsequies on November 19, 1934.

A medical organizer who was recognized throughout his career as possessing rare qualities of leadership, and for the last twenty-five years, continuously an official servant of the medical profession.

As president of the Medical Society of the County of New York, president of the Medical Society of the State of New York, president of the American Medical Association, president of the American Association for the Hard of Hearing, and at the time of his death, an active member of the Committees on Public Health and Public Relations of this State Society, he never rested from his labors on behalf of the values of the relationships between physicians, and the promotion of their social cooperation in the service of the public health.

As professor of otology for twenty years, and in his subsequent life, he never ceased his activities for the benefit of the Hard of Hearing, so that the title of "Great Crusader" was given him by these afflicted people, who will remember him always.

Unspoiled by great distinctions, he remained a faithful friend, a lovable companion, a devoted servant of the science and art of medicine, a gentleman and a physician.

DR. COLIE of New York: On behalf of this body and in all solemnity and recollection of the eminent services of Dr. Phillips, I move that this be spread upon the minutes.

Motion seconded and carried.

3. Approval of the Minutes

THE SPEAKER: The first order of business is the reading of the Minutes of the previous meeting.

THE SECRETARY: As these Minutes have been published, I move that the reading be dispensed with and that they be adopted as published in the June 15, 1934, issue of the NEW YORK STATE JOURNAL OF MEDICINE.

Motion seconded and carried.

4. Reference Committees

THE SPEAKER: The secretary will now announce the Reference Committees.

The secretary read the following Reference Committees:

Reference Committee on Report of the President:

Chas. Gordon Heyd, *Chairman*, New York
William W. Street, Onondaga
Warren Wooden, Monroe
Joseph C. O'Gorman, Erie
Horace M. Hicks, Montgomery

Reference Committee on Report of Secretary, Council, Censors and Councilors:

C. Knight Deyo, *Chairman*, Dutchess-Putnam
Albert E. Payne, Suffolk
Morris S. Bender, Queens
Thurber LeWin, Erie
Charles T. Graham-Rogers, Kings

Reference Committee on Report of Treasurer and Trustees:

Terry M. Townsend, *Chairman*, New York
J. Lewis Amster, Bronx
James H. Donnelly, Erie
Murray B. Gordon, Kings
Edward T. Wentworth, Monroe

Reference Committee on Report of Legal Counsel:

George A. Leitner, *Chairman*, Rockland
William A. MacVay, Monroe
Augustus J. Hambrook, Rensselaer
George S. Towne, Saratoga
Norman S. Moore, Tompkins

Reference Committee on Report of Committee on Public Relations:

Frederic W. Holcomb, *Chairman*, Ulster
William J. Doerfler, Westchester
William Klein, Bronx
Thomas M. Brennan, Kings
Edgar A. VanderVeer, Albany

Reference Committee on Report of Committee on Public Health and Medical Education:

James H. Borrell, *Chairman*, Erie
Walter D. Ludlum, Kings
Edward M. Colie, New York
Edwin M. Griffith, Oneida
William G. Cooper, St. Lawrence

Reference Committee on Report of Committee on Legislation:

John J. Masterson, *Chairman*, Kings
 Louis H. Bauer, Nassau
 Robert E. DeCeu, Erie
 Adolph G. DeSanctis, New York

Reference Committee on Report of Committee on Scientific Work and Arrangements:

Arthur F. Heyl, *Chairman*, Westchester
 Richard Kovacs, New York
 Harold J. Harris, Essex
 Clarence V. Costello, Monroe
 David W. Beard, Scholharie

Reference Committee on Report of Committee on Economics:

James F. Rooney, *Chairman*, Albany
 Charles C. Trembley, Franklin
 Robert B. Hammond, Westchester
 David J. Kaliski, New York
 Morris R. Bradner, Orange

Reference Committee on Report of Committee on Trends:

Frederic C. Conway, *Chairman*, Albany
 Edward R. Cuniffe, Bronx
 Henry Joachim, Kings
 George W. Kosmak, New York
 Albert G. Swift, Onondaga

Reference Committee on New Business A:

Edward C. Podvin, *Chairman*, Bronx
 Carl Boettiger, Queens
 Leo F. Schiff, Clinton
 Marcus A. Rothschild, New York
 Herbert B. Smith, Steuben

Reference Committee on New Business B:

Luther F. Warren, *Chairman*, Kings
 Reeve B. Howland, Chemung
 DeForest W. Buckmaster, Chautauqua
 Charles E. Farr, New York
 Dudley R. Kathan, Schenectady

Reference Committee on New Business C:

B. Wallace Hamilton, *Chairman*, New York
 Albert A. Gartner, Erie
 William P. Howard, Albany
 George C. Vogt, Broome
 Thomas E. McQuade, Greene

Credentials:

Daniel S. Dougherty, New York
 Peter Irving, New York

5. President's Report

Section 33

THE SPEAKER: The President's report has been published. We now look to the president for such remarks or supplementary report as he may desire to make at this time.

DR. BEDELL: Members of the House of Delegates: Some important events have transpired since my report was submitted for publication March 15. A most vital and far-reaching law was passed by the Legislature and signed by Governor Lehman, the so-called Medical Abuses Act. This will be brought to your attention by Dr. Sondern, and, therefore, needs no further comment by me.

I would be derelict in my duty if I failed to sound a note of warning regarding the activities of Standing Committees in subdividing their work in presenting final reports. Unless this method is checked, it will become impossible to correlate all the activities of the Society. Of

even greater danger is the formation of informal groups which tend to drown the voice of organized medicine, and erect another wall against the House of Delegates' control of statements, and will if they follow the usual course of such committees prove a source of increasing antagonisms. By this specific reference, I leave the decision to you. If anyone is to speak for the Society let him first be elected by you and then continue to be under your direction and control. Any other method will be against the spirit of the rules of the Society.

The time has arrived when it is advisable to have a general reconsideration of the functions of our standing committees. At present, there is too much overlapping and too much reduplication of effort.

The By-laws should be amended, so that many inconsistencies can be corrected.

To increase the number of non-elected members of any committee is to court disaster. You know that large committees do not function as well as small and if the argument is advanced that the work is too great, then you must admit the validity of the suggestion made in my formal report, that the Society have a full time executive secretary.

My term is over, I do not make these suggestions for my own administration, but from a deep conviction that the good of all lies in the orderly conduct of business by legally elected officers, rather than by appointed committeemen, and this is not said in any disparaging way of the time-consuming work and devotion of said committeemen.

And finally, Gentlemen of the House, I implore you to guard the health of the people of this State and the interest of the members of this Society.

Many years ago some proponents of compulsory health insurance went through the State advising that procedure. At the present time, they seem to be on the opposite side of the proposition, but I assure you I have little faith in the integrity or wisdom of great vacillators.

Guard well your right of freedom, be not like dumb, driven cattle; be a hero in the strife.

THE SPEAKER: Referred to the Reference Committee on the President's Report.

6. Address of President-elect

Section 41

DR. SONDERN: Mr. Speaker and members of the House of Delegates: This is my first opportunity to express to you my appreciation of the honor of my election as your President for the ensuing year. With full realization of the responsibilities incurred, I am the more grateful for your confidence.

It shall be my endeavor to serve you in the conservation of the best traditions of our profession as well as in the effort to carry out your will as the legislative body of our profession, in this State.

In these days of continued stress and the many novel and experimental undertakings intended to help or abate them, there is unusual need for clear thinking, constructive criticism and united effort rather than lock, stock and barrel condemnation of anything and everything proposed. No one man can do this for you,

nor can a group of men do so, but the profession as a whole which commands the respect of the State, made to realize its responsibilities primarily to the people, and secondly to itself, can by properly selected representatives exert powerful influence for what is right on any executive or any legislature of any state.

Your duties as officers and members of this House involve greater responsibility now than in the days when the heart of the nation was lighter and thought was more on honest work.

Let your deliberations be sober and select your representatives with but two thoughts: ability and willingness to serve. Give them your confidence and every opportunity to act and acquit themselves in our mutual interest.

Our standing committees were established in a way that their fields of endeavor cover most any topic which requires investigation and study with a view of obviating the need for many special committees. Cases arise, however, when our Society needs men who hold strategic positions or who are specially qualified for a special task in which cases special committees seem justified.

The subject of contemplated law enactment affecting the practice of medicine has been particularly animated of late and in connection therewith I beg leave to propose the following preamble and resolution, to wit:

"WHEREAS, The House of Delegates of the American Medical Association in special meeting held in February last, reaffirmed its opposition to all forms of compulsory sickness insurance, and

"WHEREAS, It also reaffirmed its encouragement to local organizations to establish plans for the provision of adequate medical service for all of the people, adjusted to present economic conditions, by voluntary budgeting to meet the cost of illness, now

"Therefore, Be It Resolved, That this House of Delegates also reaffirms its opposition to all forms of compulsory sickness insurance, particularly expressing its opposition to the so-called Epstein Bill proposed by the American Association for Social Security, as introducing the hazardous principle of multiple taxation with inordinate costs, and

"Be It Further Resolved, That this House of Delegates reaffirms the action of its Council in accepting the ten point program adopted by the American Medical Association and published in the NEW YORK STATE JOURNAL OF MEDICINE, January 15, 1935, and

"Be It Further Resolved, That a Special Committee consisting of five members be appointed by the President to study available plans which come within the scope of the ten point program mentioned, and draw up a model plan for bringing approved medical care to all people at a cost within their means, should actual need for such plan arise. This Committee is hereby inhibited from publishing or otherwise allowing its plans and conclusions to become public until such action has been discussed and secured the approval of this House of Delegates, the Council or the Executive Committee."

The recently enacted changes in Workmen's Compensation Law is an achievement in that it places the subject of medical practice of this kind into the hands of organized medicine.

This responsibility rests on the component societies of this organization. If we meet it ably, uniformly, without fear or favor, we establish ourselves as competent to manage medical affairs and no legislature will enact measures concerning the medical profession without placing that provision in control of the management.

If on the other hand there is laxity in the handling, lack of uniformity within reasonable limits in the various county organizations, or other faults making the task of the Commissioner or the Industrial Council irksome or impossible, that would stamp organized medicine as unable to control medical activities and lay administrators and lay bodies will result in this as well as in any other law enforcement having to do with medicine.

In connection herewith I beg leave to propose the following:

7. Committee on Workmen's Compensation

Section 44

"WHEREAS, Under the recently enacted Workmen's Compensation Law it becomes imperative for the respective county societies to actively assume responsibility in carrying out its provisions, and

"WHEREAS, The Standing Committee on Economics has a heavy burden in continuing its studies of medical economic problems, and is not concerned with the supervision of an existing law, and

"WHEREAS, Conditions differ in the various counties, as to size, distribution of industry and other factors while the law is applicable generally, and

"WHEREAS, In an endeavor to aid such county societies as may request it, in the establishment of uniform regulations demanded by the law and in the interest of successful administration, be it

"Resolved, That a Special Committee on Workmen's Compensation Procedure consisting of three members be approved by the President. The duty of this Committee shall be to draw up specifications and devise a basic plan or model which shall be utilized by the county medical societies in order that the administration of the law will be successful in so far as organized medicine is concerned. This Committee shall act in an advisory capacity with the local county societies in order to avoid a county society acting automatically in contradiction to the State-wide plan. This Committee is to report to the Council or its Executive Committee as soon as possible.

"WHEREAS, The Industrial Council, under the recently enacted changes in the Workmen's Compensation Law, includes five physicians, and

"WHEREAS, In a large measure, the success of the law will depend upon the personality, qualifications and administrative ability of these physicians, and

"WHEREAS, This Society, its officers or members may be asked to submit names of candidates for these positions, therefore,

"Be It Resolved, That the Special Committee on Workmen's Compensation Procedure be requested to submit a summation of qualifications which shall be possessed by those whose names are officially submitted for consideration as eligible to the Industrial Council, and that a

report on the same shall be made to the Executive Committee as soon as possible."

I thank you, gentlemen, for your courtesy.

THE SPEAKER: Referred to the Reference Committee on the President's Report.

THE SPEAKER: Before we proceed further I have the honor and privilege of presenting to the House of Delegates, the President of the American Medical Association.

DR. BIERRING: Mr. Speaker and Members of the House of Delegates of the Medical Society of the State of New York: I wish to express my deep appreciation for the honor and opportunity for attending this session.

When our own Association entered upon its present plan of reorganization and democratic form of government in 1901, it took a long step forward in assuring stability and permanence of organized medicine; and in succeeding years the various State societies, and even the National House of Delegates have felt the influence of the sound policies always inaugurated by your House of Delegates and we still continue, I am sure, to look to the leadership of the Medical Society of the State of New York for its helpful influence in solving some of the critical problems of the present period.

On behalf of the American Medical Association it is my pleasure to extend its most cordial greetings and felicitous wishes for an interesting and successful session.

THE SECRETARY: I move that the usual custom be adopted that the reports of all officers and committees be sent to the Reference Committee as printed without reading.

Motion seconded and carried.

8. State Professional Advisory Committee to the TERA

Section 56

DR. BAUER of Nassau: "WHEREAS, There are many unsatisfactory points in the Regulations of the TERA, and,

"WHEREAS, These regulations were drawn up with little regard for the viewpoint of the medical profession, and,

"WHEREAS, These regulations provide for the appointment of a State Professional Advisory Committee and local professional advisory committees, and,

"WHEREAS, The State Committee has never been appointed although many of the local ones have, and,

"WHEREAS, Great progress could be made in making the TERA schedule and regulations more satisfactory if the State Society appointed a State Professional Advisory Committee, and

"WHEREAS, Such a State Professional Advisory Committee could act as a co-ordinator of local professional advisory committees and handle for the local committees all matters relating to the State TERA, and,

"WHEREAS, The whole Emergency Relief situation in local districts would be much more satisfactory if there were proper co-ordination of local activities by the State Society, therefore,

"Be It Resolved, That a State Professional Advisory Committee to the TERA be appointed which shall act in such capacity, and

"Be It Further Resolved, That the President of the Medical Society of the State of New

York appoint such a committee to consist of five members."

THE SPEAKER: Referred to Reference Committee on New Business A.

9. Control of Reproduction

Sections 51-61

DR. KOSMAK of New York: "WHEREAS, State and Federal Legislation governing the control of reproduction is conflicting and renders certain phases of medical practice illegal; it is important that the medical profession as a whole should undertake to clarify and lead in the solution of these questions which involve medical practice and procedures. The importances of such control in medical practice, where such control constitutes a therapeutic measure, is obvious to all medical men.

"Resolved, That the House of Delegates of the Medical Society of the State of New York recommends to the House of Delegates of the American Medical Association that it officially sanction the appointment by the Board of Trustees of a Committee to study carefully all these related problems and formulate at least a preliminary report to be presented to the 1936 session of the House of Delegates."

THE SPEAKER: Referred to Reference Committee on New Business B.

10. Standards for Regulation of Catgut

Section 62

DR. HEYD: "WHEREAS, The qualities desired in catgut for human use are absolute sterility and absorbability, and

"WHEREAS, Most catgut supplied for service on human bodies is manufactured for profit, and

"WHEREAS, Recent reports indicate that infected catgut or incompletely sterilized catgut is being sold, and

"WHEREAS, This constitutes a menace to the public,

"Be It Resolved, That the House of Delegates of the Medical Society of the State of New York, through its Delegates to the American Medical Association, memorialize the House of Delegates of the American Medical Association to set up a Committee, or such agencies as will investigate and elaborate standards and in general formulate a policy in regard to catgut as will safeguard the community."

THE SPEAKER: Referred to Reference Committee on New Business C.

11. Supplementary Report of Treasurer

Section 45

DR. GOODRICH: From the standpoint of the Treasury, the practical result of the administration of the JOURNAL under the Journal Management Committee has been exceedingly satisfactory. The economies can be summed up by comparing the 1933 total expenses with the 1934 total expenses:

1933—\$18,915, or \$1.75 per member

1934—\$9,223.53, or \$.70 per member

The investment record is a credit to your Trustees and former treasurers. These investments have proven 91 per cent sound throughout the years of the depression. Their market value

December 31, 1934, was 90 per cent of cost. Some bonds are now quoted at prices maximum for all time. During the year 1934 there was an increase in the market value of the securities owned by the Society of \$5,066.24.

The Committee on Trends expenditures show as exceedingly small due to but a few days' operation in the year 1934. Since the new year began these expenses have increased largely. The battle is on with the enemies of the prevailing type of medical practice. These people are spending millions of dollars to provide for our enslavement and regimentation. This Committee on Trends and some of the Standing Committee must largely conduct our local State fight for us. All will probably need more extensive financial support inasmuch as we must contemplate not only defense of our position but aggressive action leading to the rout of the enemies of the people. Their threat is to deny the individual the right to choose his physician with payment in accordance with mutual agreement. We must enlighten the public with real truths, convincingly presented to counteract the deceitfulness and mis-statements of the propagandists for politically dominated regimentation. This education will demand the highest class of patently unselfish publicity. This costs money. Some of our members feel sure that we shall need to expend money to assist County Societies in undertaking the duties and responsibilities imposed upon them by the new amendment to the Workmen's Compensation Law.

We urge you to maintain the modest "war chest" you have built up in past years. Our profession and prospective patients have never been in greater danger, never had the prospect of a longer, harder fight ahead. The enemies have millions to spend. We must at least keep a few thousand upon which to depend if our dues are insufficient for our expenditures. Moreover, this war chest should be somewhat increased annually. It should be replenished when depleted. It is there to be used for great emergencies. It is said that life is a lottery. If so, when professional security is the prize, how many "tickets" should we buy?

THE SPEAKER: Referred to Reference Committee on Report of Treasurer and Trustees.

12. Remission \$2.50 Per Capita to Erie County

Section 63

DR. BORRELL of Erie: "WHEREAS, The Medical Society of the County of Erie has undertaken certain projects for the benefit of organized medicine, and

"WHEREAS, An assessment of an additional \$5.00 per capita has been made against each member of the Medical Society of the County of Erie, by their Comitia Minora, and

"WHEREAS, The funds thus derived are insufficient to assure the success of these projects, and

"WHEREAS, The Medical Society of the County of Erie has encountered unusual antagonistic local conditions,

"Be it Resolved, To petition the House of Delegates to instruct the Board of Trustees and the Treasurer to remit to the Treasurer of the Medical Society of the County of Erie an

amount equal to \$2.50 per member."

THE SPEAKER: Referred to Reference Committee on New Business C.

13. School Children with Hearing Defects

Section 59

DR. HAMBROOK of Rensselaer: "RESOLVED, That school children with hearing defects sufficient to be construed as physically handicapped may come under the jurisdiction of Children's Court Act, Ch. 393, L. 1930, and entitled to advantages of education and medical treatment afforded by that Act."

THE SPEAKER: Referred to Reference Committee on New Business A.

14. Compensation Cases, Fee List

Section 57

DR. HOLLIS of Oswego: "Resolved, That in consideration of the fee list to be used in the treatment of compensation cases, that the President of the Medical Society of the State of New York request each District Branch of the Society to call a meeting of their Economic Committees and that these Committees prepare a schedule of fees commensurate with the fees of their localities, and

"Be It Further Resolved, That the schedules of fees thus prepared be presented to the President of the Medical Society of the State of New York for his guidance in the preparation of the State fee list."

THE SPEAKER: Referred to Reference Committee on New Business A.

15. Physical Therapy Section

Sections 24-53

DR. HARRIS of Essex: "WHEREAS, At the meeting of the Council of the Women's Medical Society of New York State held at the DeWitt Clinton Hotel, May 12, 1935, representing women physicians of the Medical Society of the State of New York, a motion was made and unanimously carried that a Section on Physical Therapy be made part of the scientific program of the Annual Meeting of the State Society, as being beneficial to the general practitioner, and

"WHEREAS, It is evident that the subject of physical therapy is being neglected by its omission from the scientific program of the Medical Society of the State of New York, with great loss to the public and to the profession,

"Therefore, Be It Resolved, That a Section on physical therapy be created."

THE SPEAKER: Referred to Reference Committee on New Business B.

16. Remission of Dues of Members Carrying on Post-Graduate Study Outside the State

Section 54

DR. MARSLAND of Westchester: "WHEREAS, Members of the Medical Society of the State of New York sometimes leave the State for extended periods for the purpose of carrying on post-graduate study in medicine in other parts of the United States or abroad; and

"WHEREAS, This practice should be encouraged in every legitimate way by the organized medical profession; and

"WHEREAS, The By-Laws of the Medical Society of the State of New York at present contain no provision whereby a member absenting himself from the State for this purpose can be excused from the payment of dues to his county and state society;

"Therefore, Be It Resolved, That it is the belief and recommendation of the Medical Society of the County of Westchester that members of this Society who wish to leave the State for the purpose of carrying on post-graduate study in medicine outside of the State for a period of nine months or longer in any year should be retained as regular members of their County and State Medical Societies without the necessity of paying dues or assessments during the years in which they are absent; and

"Be It Further Resolved, That the Medical Society of the County of Westchester hereby memorializes the Medical Society of the State of New York to the effect of this resolution."

THE SPEAKER: Referred to Reference Committee on New Business B.

17. Industrial Medicine and Surgery Section

Section 64

DR. KALISKI of New York: "WHEREAS, The passage of the Workmen's Compensation Amendment has brought about a decided change in the scheme of medical care to injured and disabled workmen and women, and

"WHEREAS, Under the new law it is desirable to draw into the practice of industrial medicine and surgery as large a group of competent, qualified and ethical practitioners as possible, and

"WHEREAS, Many problems both medical, legal and administrative will present themselves for study and discussion, and

"WHEREAS, A focal point for the discussion of all such problems, as well as for the presentation and discussion of scientific problems incident thereto is desirable,

"Therefore, Be It Resolved, That a new scientific section to be known as the Section on Industrial Medicine and Surgery be established as a regular section of the State Society."

THE SPEAKER: Referred to Reference Committee on New Business C.

18. Practice of Medicine by Aliens

Sections 28-60-92

DR. VAN HOESEN of Columbia: "RESOLVED, That the Columbia County Medical Society believes that the present regulation of granting a license to practice medicine in New York State to a foreign-born and foreign-educated physician without medical examination should be amended.

"Having in mind the large number of our own citizens who apply each year for admission to our medical schools, the greater percentage of whom are rejected, and also the very high standard of our medical curriculum, it seems to us unfair and unwise to grant a license to a foreign-born and foreign-educated physician to practice medicine in this state under the present arrangement."

THE SPEAKER: Referred to Reference Committee on New Business A.

19. Medical Service Bureaus

Section 52

DR. REULING of Queens: "WHEREAS, There are a number of so-called Medical Service Bureaus operating in the metropolitan area and probably in other localities throughout the state, as exemplified by the New York Medical Service Company of Brooklyn, New York, and the Family Medical Service, Inc., of Richmond Hill, New York, and

"WHEREAS, These companies, or bureaus, solicit and contract with patients to furnish medical service, acting thereby as "cappers" or "steerers" as defined in the Oregon State Law, and

"WHEREAS, These procedures are not to the best interests of the public health or the medical profession, and

"WHEREAS, A precedent has been established in this state in outlawing the so-called "ambulance chasers" in the legal profession and similar laws have been enacted regarding the practice of soliciting and advertising in the dental profession,

"Therefore, Be It Resolved, That the House of Delegates instruct the Secretary of the Society to request the Attorney-General to investigate the legality of the activities of such bureaus or companies and to take such action, as in his opinion, is warranted by the facts. If in the opinion of the Attorney-General these activities are not in violation of the existing law, then

"Be It Resolved, That the Legislative Committee in conjunction with legal counsel of the Society be instructed to draft such amendments to the present law for introduction at the next session of the Legislature as will make illegal the activities of such companies or bureaus."

THE SPEAKER: Referred to Reference Committee on New Business B.

20. Nutrition and Dietetics Section

Section 58

DR. ANT of Kings: "WHEREAS, The public has been misled by the belief that the medical profession is only interested in surgery, disease, and drugs, and that the average physician knows little in regard to the great problem of nutrition and dietetics, thereby not only leaving an opening for exploitation but actually creating an extra medical field for faddists;

"Therefore, Be It Resolved, That a section or a sub-section of Nutrition and Dietetics be established so as to enlighten the public that the physician is the real advisor in nutrition and dietetic problems, and also to further advance the science of nutrition and dietetics."

THE SPEAKER: Referred to Reference Committee on New Business A.

21. Mineral Waters Throughout the State

Sections 55-89

DR. BEARD of Schoharie: "WHEREAS, Beneficial mineral waters were long ago found at Alden, Erie County, Richfield Springs, Otsego County, and Sharon Springs, Schoharie County, and

"WHEREAS, The health-giving and medical properties of these waters are now generally known and recognized, and

"WHEREAS, It would be of great good to the health and welfare of the people of the State to make available to them the benefits of these natural and curative waters, and

"WHEREAS, The State reservation at Saratoga Springs is an excellent example of a tried and successful method of bringing to the people these gifts, and

"WHEREAS, It would seem to be a function of the State to conserve these natural resources and make them available to its citizens by establishing State reservations similar to that of Saratoga Springs, at Alden, Richfield Springs, and Sharon Springs,

"Now, Therefore, *Be It Resolved*, That we, the members of the Comitia Minora of the Schoharie County Medical Society earnestly petition the House of Delegates of the Medical Society of the State of New York to take action during its coming session requesting Governor Lehman to approve the resolution introduced in the State Assembly by Hon. William S. Dunn, to make a comprehensive study and survey of the mineral springs at Alden, Erie County, Richfield Springs, Otsego County, and Sharon Springs, Schoharie County."

THE SPEAKER: Referred to Reference Committee on New Business B.

THE SPEAKER: There being no further resolutions I declare a recess while the Reference Committees organize. The House will reconvene at 1:30 P.M.

AFTERNOON SESSION, 1:30 P.M.

The meeting was called to order by the Speaker at 1:30 P. M.

22. Medical Reserve Officers' Training Corps Units

Section 83

THE SECRETARY: I have a resolution sent from the County of New York regarding the continuation of training school for reserve officers. It is as follows:

"WHEREAS, It was thoroughly demonstrated during the World War that this country paid highly in blood and money because there was no adequate mechanism for speedy mobilization and training defensive forces of the nation, and

"WHEREAS, The Medical Department of the United States Army was in no noteworthily better condition than other departments, despite the fact that it must always be mobilized before combat and before other arms are mobilized, and

"WHEREAS, Under authority of the National Defense Act since the World War the Medical Department of the Army has been maintaining Reserve Officer Training Corps Units in medical schools which supplied about one-half of the new medical reserve personnel; and which units gave valuable training preparatory to any national emergency, but these training units have now been discontinued by act of Congress, ostensibly as an economy measure; and, which leaves the War Department greatly embarrassed

in the procurement of new medical officer personnel, which embarrassment will increase to serious proportions after a very few years,

"Therefore, *Be It Resolved*, That the Medical Society of the State of New York protest Federal economies harmful to our national defense, and,

"Be It Further Resolved, That the Medical Reserve Officers' Training Corps Unit should be re-established as soon as possible, and

"Be It Further Resolved, That a copy of these resolutions be forwarded to the War Department, the Surgeon General of the United States Army, the Federal Congressmen from the State of New York, and the American Medical Association."

THE SPEAKER: Referred to Reference Committee on New Business A.

23. Putnam County Society

THE SECRETARY: The following communication has been received from the Dutchess-Putnam Medical Society regarding the petition to form a Putnam County Society, which petition was referred to them for conference and report back to this House of Delegates:

"My dear Dr. Dougherty:

"Replying to your letter of March 15th, I beg to state that at the September 14, 1934, meeting of the Dutchess-Putnam Medical Society, the petition of the Putnam County physicians was received and it was unanimously voted that the petition be accepted and referred back to the House of Delegates for final action.

"Very truly yours,

"Dutchess-Putnam Medical Society
"H. P. Carpenter, Secretary."

THE SECRETARY: I move the report be accepted and the physicians in Putnam County be granted permission to organize and obtain a charter.

Motion seconded and carried.

24. Physical Therapy and Radiology

Sections 15-53

THE SECRETARY: I have a resolution sent to me by the New York Physical Therapy Society which is as follows:

"WHEREAS, Physical therapy has been definitely established as part of the modern practice of medicine, and

"WHEREAS, Among the commendable efforts of the Medical Society of the State of New York in educating general practitioners in the proper use of physical measures, the inauguration of a one-day session in physical therapy at the annual meeting of the Society has met with continued favorable response in this State and has been also held up as an example to be followed in other States, by the Council on Physical Therapy of the American Medical Association, and

"WHEREAS, Such session on physical therapy has been in existence at the annual meeting for four successive years, with comprehensive programs and with a good attendance,

"Be It Resolved, That the Council be petitioned to combine the session on physical therapy with the existing Section on Radiology, thus creating a Section on Physical Therapy and

Radiology, such arrangement being considered fair to both departments of medicine and not adding the burden of another full section to the annual meeting."

THE SPEAKER: Referred to Reference Committee on New Business B.

25. Gratuitous Medical Services

Section 81

THE SECRETARY: The Medical Society of the County of Kings sends the following resolution: "At a regular stated meeting of the Medical Society of the County of Kings, the following set of resolutions, proposed by the Committee on Medical Economics, was passed by the Society:

"WHEREAS, The Colorado State Medical Society, by referendum vote, has amended its By-Laws, as follows:

"Section 1. This Society declares that it is a right and a duty of the medical profession to determine for itself what individuals, institutions and organizations shall have claim upon physicians for gratuitous services.

"Section 2. No member of this Society may offer or give to the poor wholly or partially gratuitous medical services, other than in the traditional relationship of physician to private patient, unless the recipient of such services has first been declared eligible thereto by an agency which is engaged in social service investigation and is operating under the general supervision of, and under regulations laid down by, this Society.

"Section 3. The provisions of this Chapter shall be construed in harmony with the Principles of Ethics of the American Medical Association, and nothing herein shall be construed as superseding or amending said Principles of Ethics."

"WHEREAS, Present economic insecurity and the uncontrolled dole of free medical care now threatens the stability and integrity of the high standard of medical ethics, conduct and service in this Metropolitan District,

"Be It Therefore Resolved, That the Medical Society of the County of Kings memorialize the Medical Society of the State of New York, through its Executive Committee, to give consideration to the action of the Colorado State Medical Society, and to advise the Executive Committee of the Medical Society of the State of New York that this, the Medical Society of the County of Kings, would look with favor upon similar action in New York State."

THE SPEAKER: Referred to Reference Committee on New Business C.

26. Open Forum

Section 85

DR. PODVIN: "WHEREAS, The problems of medical economics are of great interest to the members of the Medical profession, and

"WHEREAS, A great many men would like an opportunity to discuss these problems,

"Be It Resolved, That the Management Committee of the STATE MEDICAL JOURNAL be requested to open and conduct an open forum for the free expression of opinions on matters pertaining to medical economics."

THE SPEAKER: Referred to Reference Committee on New Business B.

27. Advertising in Foreign Language Newspapers

Section 84

DR. KAUFMAN of New York: "WHEREAS, The flow of immigration into this country has been reduced to a minimum, and

"WHEREAS, Those who have immigrated into this country have had sufficient time, and in the majority of instances have learned the English language or have come to know their personal physicians,

"Therefore, Be It Resolved, That the House of Delegates of the Medical Society of the State of New York express its opinion that there is no further justification for foreign speaking physicians to advertise in the foreign language newspapers, thus putting these physicians in an advantageous position to the detriment of the non-foreign speaking doctors, and

"Be It Further Resolved, That such advertising is contrary to the Principles of Professional Conduct of the Medical Society of the State of New York."

THE SPEAKER: Referred to Reference Committee on New Business B.

28. Practice of Medicine by Aliens

Sections 18-60-92

DR. HOLCOMB of Ulster: "RESOLVED, That the House of Delegates recommend the enactment of an Act by the State Legislature prohibiting the practice of medicine by aliens until they have obtained full citizenship in the United States of America."

THE SPEAKER: Referred to Reference Committee on New Business C.

29. Misinformation by Radio

Section 95

DR. ARANOW: "WHEREAS, The public health is undermined by radio broadcasts, purporting to impart medical information to the public, either, as sustaining programs or as part of advertising campaigns, and

"WHEREAS, This information is usually broadcast by non-medical persons who can hardly realize the fallacies of the things they broadcast, and

"WHEREAS, This leads to misinformation, which conceivably also might cause health damage to those of the listening audience who followed it,

"Therefore, Be It Resolved, That the House of Delegates of the Medical Society of the State of New York instruct their delegates to the American Medical Association to bring this to the attention of the House of Delegates of the American Medical Association to the end that suitable National legislation be enacted to obviate this evil and threat to the public health."

THE SPEAKER: Referred to the Reference Committee on New Business A.

30. Free Medical Care

Section 87

DR. SLAVIT of Kings: "WHEREAS, The advances of modern scientific medicine have resulted in raising the cost of medical care to a degree such as to render it financially a hardship for millions and entirely unavailable for millions more, and

"WHEREAS, There is thus created the paradox of millions of our people needing medical attention and not getting it, while thousands and tens of thousands of physicians and allied workers as well are able and willing to render such medical care and are denied the opportunity to do so and are, also, further denied an income to maintain an adequate economic existence and pursue a proper professional career, and

"WHEREAS, All plans, lay or medical, hitherto attempted or proposed to solve this dilemma have proved futile in meeting this serious situation, and

"WHEREAS, There is danger of ill-conceived and pernicious plans of health insurance being introduced and passed by the respective State Legislatures and even Congress,

"Be It Resolved, That this House of Delegates endorse the real fundamental solution of the problem, to wit:

"1. A system of medical care free to all the people, payable out of taxation, the Doctors and allied workers to be employed by the Municipal, County, State, or Federal government, in this public medical service, and to be compensated on a graduated salary basis;

"2. To insure a high level of scientific work that this public medical service should be carried on by the doctors practicing in groups in medical centers and institutions.

"3. The system to be operated and regulated democratically by the medical and allied professions protected by an adequate civil service system.

"4. Existing public health agencies and institutions be extended and developed to include palliative and curative medicine as well as protective medicine."

THE SPEAKER: Referred to Reference Committee on New Business B.

31. Child Labor Amendment

Section 93

DR. FRUCHT of Kings: "WHEREAS, The medical profession has from time immemorial professed its devotion to the service of humanity and has in particular sponsored all movements protecting the health of the young, and

"WHEREAS, An editorial appeared in the New YORK STATE JOURNAL OF MEDICINE opposing the Child Labor Amendment,

"Be It Resolved, That this House of Delegates disapprove the policy of the said editorial in reference to so important and progressive a measure."

THE SPEAKER: Referred to Reference Committee on New Business C.

32. Hartz Article

Section 94

DR. SLAVIT of Kings: "WHEREAS, In the issue of the NEW YORK STATE JOURNAL OF MEDICINE, March 1, there appeared an article entitled, "Will America Copy Germany's Mistakes?", by one Gustav Hartz, and

"WHEREAS, There also appeared, in the same JOURNAL, favorable comment upon said article quoting the author, said Gustav Hartz, to be a great economist and great labor leader, and

"WHEREAS, The said article and comments were reprinted in booklet form and widely circulated among the medical profession of the State under the sponsorship of the Public Relations Bureau, creating a certain impression and opinion among the members of the profession on matters of vital concern to the profession, and

"WHEREAS, The said article, reprints, and comments, contain statements that are misleading concerning both the author and the subject matter of the article in question, thereby, in effect, creating a misleading impression in the minds of the profession, and

"WHEREAS, An examination of the said article and an independent investigation of its authorship and sources show that the said Gustav Hartz is neither a well-known economist nor prominent labor leader, but is instead a contact man for special interests, and is practically unknown as an author, and is a member of a reactionary and repudiated labor organization,

"Be It Therefore Resolved, That this House of Delegates go on record repudiating the said article, its reprint and circulation."

THE SPEAKER: Referred to Reference Committee on New Business A.

33. Report of Reference Committee on the Report of the President

Section 5

DR. HEYD: The Reference Committee on the report of the President begs leave to report as follows:

The President's report contains no definite recommendations. There are, however, two definitely expressed suggestions and a number of opinions offered for your consideration.

The Reference Committee believes that these thoughts and suggestions should be amplified in order that you may be more fully acquainted with the background.

We quote from the Annual Reports, page 1, column 2:

34. Standing Committees, Nomination of

"The members of the Standing Committees of the Society are theoretically nominated by the President and elected by the Council. In reality the President has nothing to do with their selection or control over their functions. It would be infinitely better for you, the House of Delegates, to elect them or give the President full power to appoint them."

There are two different thoughts in this paragraph. Page 27 of the Constitution and By-Laws, Chapter 10, Section 8, states: "The Chairman of all Standing Committees shall be elected by the House of Delegates unless otherwise provided for in the By-Laws. The remaining members shall be elected by the Council." It follows then that the members of the Standing Committees are in fact elected by the Council acting as the executive body of the Society. The second thought, "the President to appoint" the members of the Standing Committees, would mean administrative chaos. Such action would destroy the intention of the House of Delegates to have members of the Committee responsible to the Council.

35 Honorarium for Lectures

Page 2, Column 1

'To have the opportunity of delivering a course of lectures before medical men has always been considered a privilege and no remuneration should be expected. Obviously, expenses should be paid but no honorarium should be given. If this method was established the State Society would save a large sum the quality of the lectures would in no way suffer and it would be possible to extend the number of courses."

The honorarium cost the Society about \$1600 for the year 1934. This sum is decidedly less than the expenses incurred in giving the post-graduate courses. In the giving of the post-graduate courses, three points must be kept in mind. First, the lecturer must teach relatively simple things. Second the lecturer must not exploit himself. Third the lecturer must be under orders. For example, one lecturer gave a discussion on the treatment of nephritis in the afternoon at Amsterdam, took the night train for Malone, lectured in the morning at Malone then by automobile to Ogdensburg where he lectured in the afternoon, then drove to Watertown for a lecture in the evening. By this arrangement and for an honorarium of \$25 00, post graduate lectures were given in the counties of Herkimer, Franklin, St Lawrence, and Jefferson. In every State where graduate courses are given the honorarium system is the most successful.

36 Journal

Page 2, column 2

"The STATE JOURNAL is improving in appearance but as I have had a very high ideal for the JOURNAL, I am still disappointed and am more convinced than ever that it is absolutely necessary to employ a full time editor, and further that the JOURNAL should be under complete State Society control. Such a director would cost little more than the method under which we are now functioning for I believe that he could be secured for \$6000 while at the present time we are spending at the rate of more than \$3600 for part-time services. By regulation of the JOURNAL, we would not have complaints about financial and liquor advertisements which some think most objectionable in a scientific medical publication."

In September, 1933, Dr Kosmak, an editor of distinguished competency, made an analysis of the contents of the MEDICAL JOURNAL for that year. In October, 1933, a Special Journal Committee under the Chairmanship of Dr Booth recommended that the JOURNAL office be discontinued and that this Society enter into contract of publication. In 1932 the JOURNAL cost the Society \$21646.13. In 1933, it cost the Society \$18915.91. This huge deficit of nearly \$155 a member was largely due to the maintenance of a JOURNAL office. There was expended in 1932 for the JOURNAL office the following:

a Rent	\$1457.07
b Office	
c Honor	
Chief	500.00

d Executive Editor's salary..	4,750.00
Traveling expenses . .	50.00
e Literary Editor's salary.	1,200.00

During 1934, the cost of the JOURNAL to the Society was \$9,223.53, or a cost per member of \$67. No praise is too laudatory to the JOURNAL Management Committee for having saved for the Society \$33,000 within two years.

Liquor is a strictly legal commodity. The Sovereign State of New York derives revenue for the sale of liquor. The JOURNAL is selling advertising space for a legal commodity. The JOURNAL cancelled \$11,000 worth of advertising for drugs that were not accepted by the A.M.A. The Committee is of the opinion that there is no violation of ethics in accepting properly edited liquor advertisements.

37. The Albee Case

It is not the purpose of the Committee to try the Albee case. The President's Report in regard to the Albee case is not accurate and not in consonance with the facts.

"At a later time the Executive Committee of the Society, at the request of Dr Walter T. Dannreuther, the President of the New York County Medical Society, for financial assistance, asked the Board of Trustees to appropriate \$1,500 for expenses contingent upon the continuance of the case in the courts of the State because the Executive Committee felt that the jurisdiction of the State Society had been raised as an issue. It was the understanding of some of us that the money was to be spent in financing an appeal to the higher court. Some of the Executive Committee were disappointed when they read that the case had been closed and that a few days before the termination of the period of suspension Dr Albee was reinstated to membership in the New York County Society.

"He was suspended from the New York Academy of Medicine, June 26, 1934 on charges arising from the same alleged offense. He appealed from the verdict but the Appellate Division of the Supreme Court unanimously upheld the decision of the New York Academy of Medicine."

EXCERPT FROM MINUTES OF EXECUTIVE COMMITTEE, OCTOBER 11, 1934

"Dr Walter T. Dannreuther, President of the Medical Society of the County of New York, who had been extended the privilege of the floor stated that he had been requested by the Comitia Minora of the County Society to place before the Executive Committee some of the facts in the Albee case and request the State Society to contribute toward the expense of the prosecution the estimated cost of which would be approximately \$4452 as a bill had already been received from Mr Dawson for \$2,900 and if the case is appealed, as it will be if the Society loses, an additional \$1,500 would be required."

"Motion was duly made, seconded and carried, that the Executive Committee recommend to the Trustees that a sum not to exceed \$1,500 be contributed to the proceedings of the Albee case, in view of the fact that it was the upheld

ing of the 'Principles of Professional Conduct' of the State Society."

On a referendum vote taken October 25, 1934, the Trustees granted an appropriation of \$1,500 toward the proceedings in the Albee case.

Re: Albee vs. The Medical Society of the County of New York.

"The opinion of Mr. Justice Leary granting an alternative writ of mandamus directing the Society to restore Dr. Albee to full membership was handed down on October 25, 1934. Following the verdict, the order was settled on motion and Mr. Justice Rosenman, following the decision given by Mr. Justice Leary, signed the order directing the Medical Society of the County of New York to reinstate Dr. Albee on November 14, 1934. The appeal to the Appellate Division by the Society was perfected on November 15, 1934, by filing on that date a notice of appeal (copy of which is in the record on appeal) and a surety bond in the sum of \$500, the application for which was signed by Dr. Dannreuther as President of the County Society." [Dawson]

On December 14, 1934, Judge Collins held the individual members of the Comitia Minora in contempt of court and furthermore that the notice of appeal did not act as a stay. The attorney for New York County Society on seeking to stay found that the court had recessed until January. The Comitia Minora then had to make the decision whether to go to jail or compromise with Dr. Albee.

The New York Academy of Medicine had six months more than the County Medical Society and won the appeal on the brief of the New York County Medical Society.

38. Nominating Committee

Page 3, column 1:

"You are conscious that a small self perpetuating group attempts to control the policies of this Society. They are without delegated authority and I suggest to you that it would be much wiser, and in the long run healthier, for the House of Delegates to elect annually a Nominating Committee to serve for the following year and that no one be permitted to remain on that Committee for more than three consecutive terms. This must not interfere with nominations from the floor and the report of the Committee must be published a month before the session at the time the Annual Reports appear in the JOURNAL. The members should be selected with due regard to their geographical distribution."

The Committee believes that this suggestion contemplates a change in the Constitution and By-Laws of the Society and that the President should avail himself of Article 13 of the Constitution, and Chapter 17 of the By-Laws wherein is set forth the mechanism for changes in the Constitution and By-Laws. The Committee believes, however, that a nominating committee would serve no useful purpose and would be a violation of every principle of parliamentary procedure.

DR. HEYD: I move that this matter be submitted to the Executive Committee for study.

Motion seconded and carried.

39. Executive Secretary

Page 3, column 2:

"To those who have been in close association with the functions of the Society, there has been an increasing conviction that there should be a full-time executive in charge of affairs."

Your Committee is of the opinion that for the present the various functions of your Society are adequately and effectively maintained. Your Committee is strongly of the opinion that dislocating changes, increase in personnel and added expense is unwise and unwarranted. Your Committee recommends that this matter be referred to the Executive Committee for study.

DR. HEYD: I so move.

Motion seconded and carried.

40. Clinical Conferences

Page 3, column 2:

DR. HEYD: "From experience in other medical societies, I suggest the inauguration of a new type of State medical education-clinical conferences. This of necessity means the selection of speakers who excel in the treatment of the subject under discussion and who have the ability and the desire to clearly and succinctly place facts before their audience. I would suggest that this innovation be started next year and that the day following the close of the regular meeting be devoted to a series of short lectures and demonstrations so comprehensive in range that they will appeal to every member in the Society and so conveniently scheduled that those who wish can have a complete day of post-graduate instruction."

Your committee is in favor of the extra clinical day when and if the place of meeting renders it possible and profitable. It recommends that when the clinical day is added to the Annual Meeting that it shall be ordered by the Executive Committee and be under the direction of the Chairman of the Committee on Scientific Work.

DR. HEYD: I move the adoption of the report.

Motion seconded and carried.

41. Report of the Reference Committee on the Report of the President-elect

Section 6

DR. HEYD: The Reference Committee on the Report of the President-Elect begs to report as follows:

42. Compulsory Sickness Insurance

"WHEREAS, The House of Delegates of the American Medical Association in special meeting held in February last, reaffirmed its opposition to all forms of compulsory sickness insurance, and

"WHEREAS, It also reaffirmed its encouragement to local organizations to establish plans for the provision of adequate medical service for all of the people, adjusted to present economic conditions, by voluntary budgeting to meet the cost of illness, now

"Therefore, Be It Resolved, That this House of Delegates also reaffirms its opposition to all forms of compulsory sickness insurance, particularly expressing its opposition to the so-called Epstein Bill proposed by the American Associa-

tion for Social Security, as introducing the hazardous principle of multiple taxation with inordinate costs."

DR. HEYD: I move this resolution be adopted. Motion seconded and carried.

43. Ten-Point Program

DR. HEYD: "RESOLVED, That this House of Delegates reaffirms the action of its Council in accepting the ten point program adopted by the American Medical Association and published in the NEW YORK STATE JOURNAL OF MEDICINE, January 15, 1935."

DR. HEYD: I move this resolution be adopted. Seconded and carried.

DR. HEYD: "RESOLVED, That a Special Committee consisting of five members be appointed by the President to study available plans which come within the scope of the ten-point program mentioned, and draw up a model plan for bringing approved medical care to all people at a cost within their means, should actual need for such plan arise. This Committee is hereby inhibited from publishing or otherwise allowing its plans and conclusions to become public until such action has been discussed and secured the approval of this House of Delegates."

DR. HEYD: I move this resolution be adopted. Motion seconded and carried.

44. Committee on Workmen's Compensation Section 7

DR. HEYD: "WHEREAS, Under the recently enacted Workmen's Compensation Law it becomes imperative for the respective county societies to actively assume responsibility in carrying out its provisions, and

"WHEREAS, The Standing Committee on Economics has a heavy burden in containing its studies of medical economic problems, and is not concerned with the supervision of an existing law, and

"WHEREAS, Conditions differ in the various counties, as to size, distribution of industry and other factors while the law is applicable generally, and

"WHEREAS, In an endeavor to aid such county societies as may request it, in the establishment of uniform regulations demanded by the law and in the interest of successful administrative, be it

"Resolved, That a Special Committee on Workmen's Compensation Procedure consisting of three members be appointed by the President. The duty of this Committee shall be to draw up specifications and devise a basic plan or model which shall be utilized by the County medical societies in order that the administration of the law will be successful in so far as organized medicine is concerned. This Committee shall act in an advisory capacity with the local County societies in order to avoid a County society acting automatically in contradiction to the State-wide plan. This Committee is to report to the Council or its Executive Committee as soon as possible."

DR. HEYD: I move the adoption of this resolution.

Motion seconded and carried.

DR. HEYD: "WHEREAS, The Industrial Council, under the recently enacted changes in the Workmen's Compensation Law, includes five physicians, and

"WHEREAS, In a large measure, the success of the law will depend upon the personality, qualifications and administrative ability of these physicians, and

"WHEREAS, This Society, its officers or members may be asked to submit names of candidates for these positions, therefore

"Be It Resolved, That the Special Committee on Workmen's Compensation Procedure be requested to submit a summation of qualifications which shall be possessed by those whose names are officially submitted for consideration as eligible to the Industrial Council, and that a report on the same shall be made to the Executive Committee as soon as possible."

DR. HEYD: I move the adoption of this resolution.

Motion seconded and carried.

DR. HEYD: May I take this opportunity, as chairman of the committee to consider the report of the President and the President-elect, to comment on the tremendous amount of work that is represented.

Years of association with your Executive Committee has demonstrated that the good name of this Society and its effectiveness and the harmony with which it functions is due to the zeal of its presiding officer.

I would be derelict in my appreciation and derelict in my duty as chairman of this committee if I failed to express appreciation for the work of Dr. Arthur Bedell at this time.

45. Report of Reference Committee on the Reports of the Treasurer and Trustees

DR. TOWNSEND: Your Reference Committee on the reports of the Treasurer and Trustees submit the following report:

"It is gratifying to note the gradually decreasing net costs of the publication of the JOURNAL and the but slightly increased cost of the Directory. We hope when sales and advertising income increases the Directory may be either self-sustaining or profitable.

"In this day of shrinking values we may congratulate ourselves that the market value of our securities has increased more than \$5,000 during 1934 and that the grand total of depreciation between cost and market value in all our funds is but 9 per cent of the principal. This compares most favorably with the balance sheets of other trust and investment funds of like size.

"Your Committee endorses the advice and recommendations contained in the Supplementary Report of the Treasurer.

"The Board of Trustees deserves the thanks of our Society for their careful attention to the close economy in expenditure as well as the foresight and caution of their investment Committee.

DR. TOWNSEND: I move the adoption of this report.

Motion seconded and carried.

46. Report of Reference Committee on Report of Secretary, Council, Censors, and Councilors

DR. LE VIN: The Committee on the Report of the Secretary, Council, Councilors, and Censors submit the following:

Dr. Dougherty states that this is the tenth

report submitted and a review of a few previous reports show this one to have grown up in accordance with its years. The reason given for this steady growth is earnest study of the economic and social problems affecting organized medicine.

Out of the eight captions comparing this report the Committee wishes to comment upon the following ones:

The secretary wishes to inform the members that appropriations to Committees are never paid in bulk, but are more in the form of a drawing account, individual bills being rendered and when paid are charged against the appropriation. Any balance unspent remains in the treasury. This comment is made by the Secretary as a result of numerous inquiries from the membership.

Legislation caption sounds an encouragement to all County Society secretaries to take up the new burden imposed by the changes in the compensation law in order that the law will function to the best advantage of organized medicine.

The meetings of the District Branch Executive Committees and conferences of the legislative chairmen and secretaries of the County Societies, under the guidance of Dr. Lawrence have produced excellent results and have been productive of much good to the State Society, at small expense.

The incoming councilor's attention is called to the annual visit to the component County Societies of their districts as required by Chap. 7, Sec. 10 of the By-Laws. Furthermore, the secretary announces his readiness to aid and advise, on all work of this nature.

The report states that the total membership for the year 1935 is 13,172.

Your Committee commends the excellent work of the Secretary, Council, Councilors, and Censors, including the activities of Dr. Lawrence and Dr. Irving.

Report of the Council consists of its own activities together with the work of the Executive Committee, which includes its sub-committees.

In addition to the routine business of the Executive Committee two items were referred to the House of Delegates, namely a petition to create a section on Physical Therapy; the other a resolution seeking to interpret a previous ruling as to the procedure of a committee member, when addressing other organizations.

It is our feeling that the interpretation of a resolution is seldom successful and if the House desires any modification this may be accomplished by a rewording of the resolution.

The outstanding new thing approved by the Council was the creation of a committee within each District Branch to contact organized groups within themselves, to render available the objects, studies and purposes of these organized groups to the officers and members of the Society as a whole.

The question of a Field Officer to assist Dr. Lawrence was laid on the table, but this is a question that will need serious consideration.

Again it is urged that something be done to increase the membership under the Group Plan. The 56 per cent of members availing themselves of this plan last year has not been exceeded this year. A larger membership means lower

rates and more co-operation and security. It is to be hoped that the local societies will continue to increase their efforts in this direction.

The work of the various councilors is hereby commended. Each one has, in view of the geographic condition, a different problem and has set up and carried out a suitable program in a thorough manner.

DR. LEWIN: I move you, sir, the adoption of this report.

Motion seconded and carried.

47. Report of Reference Committee on the Report of the Committee on Public Health and Medical Education

DR. BORRELL of Erie: The wisdom of continued work under the present active and alert chairman is borne out by the quality of the report. The policy is one of consistent growth and development. Attention is invited in this connection to the report of the Third District Branch which begs that these activities be continued. Similarly the report of the Sixth District Branch is most appreciative and by implication demands the continuance and further development of these education functions. This should be the policy of the State Society in this matter. The further growth and development along broad lines should be projected. The broad outlines are for the State Society—the minutiae specific course, the function of the constituent society.

The free use of sub-committees for study is amply justified by the result produced and is recommended in the interest of an enhanced effectiveness.

It is recommended that the tentative report of the sub-committee on Child Hygiene be accepted and that the sub-committee be continued in active work.

It is recommended that the sub-committee on Maternal Welfare be continued and that its constructive plans be carried out in the course of the year.

It is recommended that the sub-committee on Pneumonia be continued, that it be commended for its work to date and that it be encouraged to press towards completion its very promising plan.

It is recommended that the general orders for visiting nurses and public health service be improved but with the understanding that such approval is general and not specific as to the inclusion or the exclusion of some particular order or direction. The sub-committee has done a lot of fine, detailed work and should be continued with commendation.

It is recommended that the sub-committee on nursing education be continued. The work of the Committee on Public Health and Medical Education has grown so important under the wise chairmanship of Dr. Farmer with the collaboration of his earnest committeemen and it has shown such great adaptability to the growing needs of our public (medical and lay) that it should receive the strongest support from the House of Delegates and from the officers of the Society.

In view of changing economic conditions and the public's awakening to the needs arising, it is recommended that for the year ahead there be included in the program of this Com-

mittee courses of instruction in the care, prevention and treatment of disabilities arising from senescence, as well as from chronic illness

DR BORRELL I move the adoption of the report

Motion seconded and carried

48 Report of the Reference Committee on the Reports of the Committees on Scientific Work and Arrangements

DR HEAL of Westchester Your Reference Committee on the report of the Committee on Scientific Work and on the report of the Committee on Arrangements, after a careful appraisal of their reports, has no choice but to applaud the accomplishments of these committees

Their reports in full detail have been published in the STATE JOURNAL. Every member of the Medical Society of the State of New York has had ample opportunity to read them. The members thus inspired to participate in the program as arranged should fill the general and sectional meeting halls

The General Session on two afternoons will be instructed in eight subjects. Ten sections on two mornings will be presented with eighty six papers and the scientific exhibit will have twenty seven demonstrations for three days

The invited guests and members deserve much credit for their efforts in preparation and presentation of their subjects

Your Reference Committee thinks it is economically unsound to amass such a wealth of material for only two days in which to grasp and assimilate this knowledge. It agrees with the chairman of the committee on Scientific Work when he "confidently predicts that we will soon be having a three- or four day Society meeting and an exhibit hall filled with exhibits and demonstrations of medical progress and clinical investigation"

To relate more detail would detract from the reports of these committees as they have been published. No suggestions for changes in the general program and arrangements are deemed necessary except as above mentioned

DR HEYL I move that the report be adopted

Motion seconded and carried

49 Report of Reference Committee on Report of Legal Counsel

DR LEITNER of Rockland The Committee to consider the report of the Legal Counsel begs to submit the following

We wish to call attention to the amount of work performed by the legal counsel of the Medical Society of the State of New York for the year, March 1, 1934, to and including the 28th of February, 1935. The year has been an exceedingly busy one both in court and in consultations. Mr Lorenz J Brosnan, our counsel is ably assisted by his very capable associates Mr Thomas H Clearwater and Mr William F Martin and with a very efficient office staff, the work assigned to his department has been performed in a creditable manner. Due recognition is also given to the active co-operation of the officers of the Medical Society of the State of New York.

We wish to again emphasize the great number of malpractice actions being instituted against members of the medical profession, and in most cases, for large amounts. We need protection and we have had in operation for over a decade a group plan of insurance which gives the members an opportunity to protect themselves against this hazard. The Insurance Committee, composed at the present time of Dr Charles H Goodrich and Dr Samuel J Kopetzky, has held a number of meetings in the past year in connection with questions that are before them for consideration. They have worked earnestly to advance the group plan of insurance for our members.

During the twelve months 232 actions have been instituted as against 230 for the previous thirteen months. Of the 201 actions disposed of during this period, 39 have been settled. In 156 actions judgments have been obtained for the defendants after trial, or they have been disposed of through dismissal discontinuance or abatement. In six cases judgments were rendered in favor of the plaintiff, and two of these are now pending in the Appellate Division. Of five other cases appealed, three were won and two were lost. This brief summary gives some idea of the amount of work being handled by our legal department, and the very efficient manner in which it is being accomplished.

The editorials and reports during the year have been of the same high standard, covering a large variety of subjects and have proven informative and instructive to the members of the Society. The Committee feels more attention should be given to the value of these articles for the information contained and that they should be compiled and printed for handy and permanent reference. In conclusion, the Committee again wishes to point out the great need for protection of the medical profession against malpractice actions, and the importance of the group plan of insurance. Special mention is given of all members of the Society who have given of their time and talents to assist the Legal Counsel in defense of malpractice actions. Our Legal Department is worthy of our continued commendation and confidence.

DR LEITNER I move the adoption of this report

Motion seconded and carried

50 Report of Reference Committee on Report of Committee on Trends

DR CONWAY of Albany At its meeting January 10, 1935 the Committee on Medical Trends appointed Mr Dwight Anderson as Director of the Public Relations Bureau of the Society and an office was engaged in the building at 2 East 103rd Street and organization of the work proceeded.

During its first three months of operation the Bureau has sent four releases to the daily and weekly press of the State, three bulletins to County Medical Societies, press material has been handled with reference to four local Medical Society meetings, 2,500 copies of the Hartz pamphlet, "Will America Copy Germany's Mistakes?" have been mailed to Rotary Kiwanis and Lions Clubs Chambers of Commerce Bar Associations, Legislators edi-

torial writers of dailies and weeklies, editors of the state labor publications and medical journals and other key people in the medical profession and journalism. From a letter to the editor of the *New York Times* one hundred fifty-eight requests came from miscellaneous interested persons for copies of the Hartz pamphlet.

An investigation has been made regarding the attitude of the press of the state toward Medical Society matters for the purpose of improving the relations between organized medicine and the six hundred editors of daily and weekly papers in the state. This investigation had produced some enlightening information which will be made the subject of a further report to the House of Delegates at the time of the annual meeting.

A meeting of the Committee on Trends was held February 14, 1935, at which time plans were made to develop projects for increasing the co-operation of organized medicine with the press; for the development of radio contracts; for the interpretation to the public of matters arising in County Medical Societies; as well as using opportunities which will arise for co-operation with syndicates and monthly magazines.

Conferences have been held with editors, writers, radio program directors, as well as with officials of the Medical Society of the State of New York and other organizations interested in giving the public an adequate impression of the activities which are constantly going on in organized medicine in the promotion of the health and welfare of the public.

The Bureau has established an office at 2 East 103rd Street, New York City, with a staff which includes in addition to the director, a secretary and clerical assistant. An electric mimeograph has been installed to expedite the distribution of material.

This is the inauguration of a new policy by the Society for the authoritative information of the public on all matters relating to public health and profession of medicine and has great possibilities of power for the good of all concerned. The Committee has had but a short time in which to organize but has done most excellent work.

We have studied the projects of the Committee and approve of them.

We recommend that the Committee on Trends and its subordinate Bureau of Public Relations be continued.

DR. CONWAY: I move the adoption of this Report.

Motion seconded and carried.

51. Control of Reproduction

Sections 9-61

DR. WARREN: On the resolution introduced by Dr. George W. Kosmak, New York, concerning the problem of governing the control of reproduction, your Committee approves the resolution but for the sake of clearness adds the words "of the American Medical Association" at the end of the resolution as presented.

DR. WARREN: I move the adoption of the report.

Motion seconded and carried.

52. Medical Service Bureaus

Section 19

DR. WARREN: Your Committee approves the resolution submitted by Dr. Reuling with reference to so-called Medical Service Bureaus, but makes the following changes:

The original resolution read:

"Therefore, be it Resolved, That the House of Delegates instruct the secretary of the Society to request the Attorney-General to investigate the legality of the activities of such Bureaus or Companies."

We recommend the following resolution:

"Therefore, be it Resolved, That the House of Delegates request the Attorney-General to investigate the legality of the activities of such bureaus or companies."

I move the adoption of the report.

Motion seconded and carried.

53. Physical Therapy Section

Sections 15-24

DR. WARREN: On the resolution with reference to the establishment of a section on physical therapy, your Committee disapproves the resolution on the grounds that primarily there are only a few physicians in the State giving their entire attention to this work. It recognizes this newer development of growing importance and believes it will finally develop best and be of most use to the members of the Medical Society of the State of New York by integrating itself into an appropriate and already established section. Your Committee believes that physical therapy should be encouraged and urges that sections plan to have papers dealing with this subject on their yearly programs.

DR. WARREN: I move the disapproval of the resolutions.

DR. KOVACS of New York: May I move a substitute resolution?

THE SPEAKER: You may.

DR. KOVACS: "WHEREAS, A Session on Physical Therapy has been held for the past four years during the Annual Meetings of the Medical Society of the State of New York, and

"WHEREAS, This session has been always well attended and has been useful in emphasizing the importance of Physical Therapy as part of the practice of medicine and helped to clarify its uses for the general practitioner,

"Be It Resolved, That a one-day Session on Physical Therapy be continued during the Annual Meetings and its officers be appointed from year to year by the Executive Committee."

I move the adoption of this resolution.

Motion seconded and carried.

54. Remission of Dues of Members Carrying on Post-Graduate Study Outside the State

Section 16

DR. WARREN: Resolution concerning the remitting of County and State Society dues to members taking post-graduate work outside the State.

Your Committee disapproves the recommendation on the grounds:

1. That there are only a few such cases occurring throughout the State.
2. That the State Society has no authority to remit County Society dues of any county member.

3. That the resolution would necessitate a change of By-Laws of the State Society relative to such matter.

I move the adoption of the report disapproving the resolution.

Motion seconded and carried.

55. Mineral Waters Throughout the State

Sections 21-29

DR. WARREN: Your Committee disapproves the resolution on a technical ground, namely, the springs of Erie County, Otsego County, and Schoharie County are mentioned in the resolution, whereas the resolution is signed only by officers of the Schoharie County Medical Society.

Not knowing the attitude of the Erie and Otsego County Medical Societies, your Committee disapproves the resolution.

I move the adoption of the report disapproving the resolution.

It was moved and seconded and carried that the resolution be referred back to the Reference Committee on New Business B for further consideration and to obtain the opinion of the members from the other two counties.

56. State Professional Advisory Committee to the TERA

Section 8

DR. PODVIN: The following resolution was introduced by Dr. Bauer of Nassau:

"WHEREAS, There are many unsatisfactory points in the regulations of the TERA, and

"WHEREAS, These regulations were drawn up with little regard for the viewpoint of the medical profession, and

"WHEREAS, These regulations provided for the appointment of a State Professional Advisory Committee and local professional advisory committees, and

"WHEREAS, The State Committee has never been appointed although many of the local ones have, and

"WHEREAS, Great progress could be made in making the TERA schedule and regulations more satisfactory if the State Society appointed a State Professional Advisory Committee, and

"WHEREAS, Such a State Professional Advisory Committee could act as a co-ordinator of local professional advisory committees and handle for the local committees all matters relating to the State TERA, and

"WHEREAS, The whole Emergency Relief situation in local districts would be much more satisfactory if there were proper co-ordination of local activities by the State Society, therefore

"Be It Resolved, That a State Professional Advisory Committee to the TERA be appointed which shall act in such capacity, and

"Be It Further Resolved, That the President of the Medical Society of the State of New York appoint such a committee to consist of five members."

Your Committee learned that such a State Committee had been appointed at one time and

they functioned and their regulations you may all have seen in what is known as the green book. Since that time, however, the Committee has lapsed, therefore, your Committee finds that there is a provision in the regulations of the State TERA for the appointment of such a committee by the State Medical Society.

Such a committee was at one time appointed, and the reason that the continuation of such a committee might be of benefit both to the practicing physician and the recipients of medical help we recommend the adoption of the resolution, with the omission of the third and fourth clauses in the preamble, which assume that no such committee has ever been appointed.

I move the adoption of this report.

Motion seconded and carried.

57. Compensation Cases, Fee List

Section 14

DR. PODVIN: In reference to the following resolution introduced by Dr. Hollis:

"Be It Resolved, That in consideration of the fee list to be used in the treatment of compensation cases, that the President of the State Medical Society request each district branch of the Society to call a meeting of their economic committees and that these committees prepare a schedule of fees commensurate with the fees of their localities, and

"Be It Further Resolved, That the schedules of fees thus prepared, be presented to the President of the Medical Society of the State of New York, for his guidance in the preparation of the State Fee List."

Your Committee finds that this matter is fully covered in the suggestions made by the President-elect in his address and taken up by the Reference Committee on the President's report. We find that their recommendations cover the subject adequately and, therefore, recommend that this resolution be not adopted.

DR. PODVIN: I move that the report of the Committee be accepted recommending that this resolution be not adopted.

Motion seconded and carried.

58. Nutrition and Dietetics Section

Section 20

DR. PODVIN: In reference to the following resolution introduced by Dr. Ant of Kings:

"WHEREAS, The public has been misled by the belief that the medical profession is only interested in surgery, disease, and drugs, and that the average physician knows little in regard to the great problem of nutrition and dietetics, thereby not only leaving an opening for exploitation but actually creating an extra medical field for faddists,

"Therefore, Be It Resolved, That a section or a sub-section of nutrition and dietetics be established so as to enlighten the public that the physician is the real advisor in nutrition and dietetic problems, and also to further advance the science of nutrition and dietetics."

Your Committee believes that as a general principle increasing the number of sections is not advisable. Furthermore, since nutrition is an integral part of all of the major divisions of medicine, we feel it unnecessary to have a special section on this subject.

We, therefore, recommend that this resolution be not adopted. We further recommend that the various sections of this Society be requested to include papers on the topic of dietetics and nutrition as part of their programs.

DR. PODVIN: I move that the report of the Committee be accepted.

Motion seconded and carried.

59. School Children with Hearing Defects

Section 13

DR. PODVIN: In reference to the resolution introduced by Dr. Hambrook, your Committee has, with the approval of the introducer, made a slight change in the wording so that it now reads as follows:

"Resolved, That the Medical Society of the State of New York recommends that school children with hearing defects sufficient to be construed as physically handicapped may come under the jurisdiction of Children's Court Act, Ch. 393, L. 1930, and be entitled to advantages of education and medical treatment afforded by that Act."

Your Committee finds that the purpose of this resolution is to make it possible for the hard of hearing children to receive certain educational and medical advantages which they are now denied under a strict construction of the Children's Court Act referred to in the resolution.

I move the adoption of this report.

Seconded and carried.

60. Practice of Medicine by Aliens

Sections 18-28-92

DR. PODVIN: "RESOLVED, That the Columbia County Medical Society believes that the present regulation of granting a license to practice medicine in New York State to a foreign-born and foreign-educated physician without medical examination should be amended.

"Having in mind the large number of our own citizens who apply each year for admission to our medical schools, the greater percentage of whom are rejected, and also the very high standard of our medical curriculum, it seems to us unfair and unwise to grant a license to a foreign-born and foreign-educated physician to practice medicine in this state under the present arrangement."

Your Committee feels that this resolution should be referred to the Committee on Public Health and Medical Education for further study and report. It is also suggested that counsel be consulted in reference to the legal status of this resolution.

DR. PODVIN: I move the adoption of this report.

Motion seconded and carried.

61. Control of Reproduction

Sections 9-51

THE SPEAKER: The following communication has just been received.

"At the Twenty-ninth Annual Meeting of the Women's Medical Society of New York State, held at the DeWitt-Clinton Hotel this morning, May 13, a motion was made and carried to extend to the Medical Society of the State of

New York the unanimous and hearty endorsement of the resolution proposed by the Medical Society of the State of New York that a special committee be appointed by the House of Delegates of the American Medical Association to study the problems surrounding human reproduction." Signed: Madge C. L. McGuinness, acting president and Margaret P. McCarthy, secretary."

Referred to Reference Committee on New Business B.

62. Standards for Regulation of Catgut

Section 10

DR. HAMILTON: On the resolution introduced by Dr. Heyd,

"WHEREAS, The qualities desired in catgut for human use are absolute sterility and absorbability, and

"WHEREAS, Most catgut supplied for service on human bodies is manufactured for profit, and

"WHEREAS, Recent reports indicate that infected catgut or incompletely sterilized catgut is being sold, and

"WHEREAS, This constitutes a menace to the public,

"Be It Resolved, That the House of Delegates of the Medical Society of the State of New York, through its Delegates to the American Medical Association, memorialize the House of Delegates of the American Medical Association to set up a Committee, or such agencies as will investigate and elaborate standards and in general formulate a policy in regard to catgut as will safeguard the community."

Your Reference Committee recommends the adoption of this resolution.

Motion seconded and carried.

63. Remission \$2.50 Per Capita to Erie County

Section 12

DR. HAMILTON: On the resolution introduced by Dr. Borrell of the County of Erie.

"WHEREAS, The Medical Society of the County of Erie has undertaken certain projects for the benefit of organized medicine, and

"WHEREAS, An assessment of an additional \$5 per capita has been made against each member of the Medical Society of the County of Erie by their Comitia Minora, and

"WHEREAS, The funds thus derived are insufficient to assure the success of these projects, and

"WHEREAS, The Medical Society of the County of Erie has encountered unusual antagonistic local conditions,

"Be It Resolved, To petition the House of Delegates to instruct the Board of Trustees and the Treasurer to remit to the Treasurer of the Medical Society of the County of Erie an amount equal to \$2.50 per member."

Your Reference Committee has listened with sympathetic interest to the details of the unusual economic problem confronting the Medical Society of the County of Erie.

Inasmuch as the refund of \$2.50 per capita is not requested for any specific purpose, and is apparently needed to satisfy a general budget

deficit, it is the opinion of the Committee that a favorable action on this resolution would establish a bad precedent and your Committee therefore recommends that the resolution be disapproved.

I move the adoption of the report

Motion seconded and carried

64 Industrial Medicine and Surgery Section

Section 17

DR. HAMILTON On the resolution presented by Dr Kaliski of New York.

WHEREAS, The passage of the Workman's Compensation Amendment has brought about a decided change in the scheme of medical care to injured and disabled workmen and women and

"WHEREAS, Under the new law it is desirable to draw into the practice of industrial medicine and surgery as large a group of competent qualified and ethical practitioners as possible and

WHEREAS, Many problems both medical, legal, and administrative will present themselves for study and discussion and

"WHEREAS, A focal point for the discussion of all such problems as well as for the presentation and discussion of scientific problems incident thereto is desirable

"Therefore, *Be It Resolved*, That a new Scientific Section to be known as the Section on Industrial Medicine and Surgery be established as a regular section of the State Society."

Your committee begs to report that it recommends the approval of the resolution for the establishment of this scientific section to be known as the Section on Industrial Medicine and Surgery

I move its adoption

Seconded and carried

65 Prize Essay

THE SECRETARY I have a report from the Chairman of the Committee on Prize Essay which is as follows

"Only one paper was presented. This was not considered worthy of being awarded a prize 'Eugene H. Pool, Chairman'."

THE SECRETARY I move the report of the Prize Essay Committee be adopted

66 Report of the Reference Committee on the Report of the Committee on Public Relations

Section 70

DR. HOLCOMB Under the able direction of Dr. Sadler, the Committee on Public Relations has carried out an active and constructive program during the past year. The work of this Committee, which has been directed toward the encouragement of the movement to cause organized medicine in the State to assume a leadership in matters pertaining to public health is a most commendable step and we feel it will be favorably noted by our Society. The practice of conferring with lay and governmental agencies instead of engaging in controversies with them is an excellent procedure

and more satisfactory results should be obtained

It is definitely advisable that men of mature judgment and active in the County Society become members and gradually assume leadership in these welfare agencies

During periods of financial and industrial depression the problem of providing adequate medical care for indigent people became a serious one and if Relief Bureaus direct this work to too great an extent we will later discover that the practicing physician is seriously curtailed in his field of endeavor. Let this idea be more completely developed in each County Society

The activities of the Committee in promoting a state wide survey of school children in regard to the diagnosis and treatment of deafness have excited most favorable comment. We all know that many of the conditions are quite easily remedied at an early age and should be attended to at that time

We recommend even greater co-operation among the County Societies and District Branches in developing this splendid movement toward the improvement of health in children

I move the adoption of this recommendation

Motion seconded and carried

67. Defective Eyesight in Children

DR. HOLCOMB We further recommend that the Medical Profession embody in this movement provisions for caring for children with defective eyesight and not entrust this important work to an optometrist

I move the adoption of this resolution

DR. BDELL I move as a substitute the following

That the care and examination of children with defective eyesight be entirely in the control of physicians

The substitute motion was seconded and carried

68 Insane and the Tuberculosis Patients

DR. HOLCOMB The care of the insane and the tuberculosis patients in the majority of cases, is admittedly a problem for State and County Institutions. Many times however, when a patient is referred for such care the family physician loses all contact with the case. Would it not be possible to recommend that such hospitals send regular reports to the physician regarding the progress and condition of their patients? It would promote a kinder feeling and a closer relationship between the members of our Society and the personnel of the State and County Hospitals

69 Crippled Children

The question of orthopedic operations on crippled children has always been a troublesome one. In the larger cities competent surgeons are usually available but in many of the smaller cities the encouragement of State aid for local surgeons may not lead to very satisfactory results. Your Committee feels that this problem deserves further and very careful consideration before making any definite recommendation

We hereby strongly endorse the suggestions

of employing a full-time field secretary whose services shall be utilized in meeting with the County societies and discussing various problems with them. Such an officer would be a most valuable addition to the County and bring about a closer relationship between the County groups and the State Organizations.

Your Committee recommends that the individual County societies appoint active committees whose function shall be to bring before the public, through the lay press, their point of view in medical questions arising in their own Counties.

Your Reference Committee wishes to congratulate the Committee on Public Relations on a constructive and forward looking program during the past year.

DR. HOLCOMB: I move the adoption of this report as a whole.

Motion seconded and carried.

70. Supplementary Report of the Committee on Public Relations

Section 66

71. Handicapped Children's Law

Sections 79-96

DR. HOLCOMB: Your Committee recommends that the question of the broadening of the application of a provision of the Handicapped Children's Law be referred to the Public Relations Committee by the House of Delegates for further consultation with the State Department of Health and Education and present definite recommendations at the next Session of the State Society.

DR. HOLCOMB: I move the adoption of this report.

Motion seconded.

After a review of the history of this subject by Dr. Sadlier it was put to a vote and the motion was lost.

THE SECRETARY: On a point of information: The Committee reported in favor of this matter and the House turned it down. Where does Dr. Sadlier's Committee now stand on the matter?

THE SPEAKER: I am waiting for a motion by Dr. Sadlier as to what his committee desires to recommend.

DR. SADLIER: We wish to be advised by the House of Delegates of the Medical Society of the State of New York, whether we as a committee shall advise any extension of the present policy of the State Department of Health and Education with reference to the administration of the handicapped children's problem. That is the prime question at issue. If you wish it, Mr. Speaker, I will bring that up under new business.

THE SPEAKER: I wish that you would bring in a specific recommendation on the subject so that we can take an affirmative or a negative vote.

72. Medical Relief of the Indigent

DR. SHERWOOD of Niagara: "WHEREAS, The Medical Society of the State of New York is on record in favor of free choice of physicians by those unable to maintain themselves, or who are likely to become a public charge, and

"WHEREAS, The policy of having the matter of free choice of physicians by the indigent subject to negotiations between individuals and special committees of the county societies has proven to be a failure in many instances, and

"WHEREAS, Many County societies are not strong enough to effect freedom of choice of the physician by the indigent,

"Therefore, be it Resolved, That the Medical Society of the County of Niagara requests the President and the House of Delegates of the Medical Society of the State of New York to urge the TERA Advisory Commission and the Director of the Temporary Emergency Relief Administration of New York State to promulgate and issue such rules and regulations regarding medical relief of the indigent as will give full force and effect to the full freedom of choice of physicians, eliminate lists or rosters, obviate the necessity of the indigent going to any definite "welfare" doctor and provide the physicians with partial remuneration, on the basis of a percentage of the usual fees for such services, within limits prescribed by the funds available."

THE SPEAKER: Referred to Reference Committee on New Business A.

73. Constitution and By-Laws

THE SECRETARY: The Committee on the Revision of the Constitution and By-Laws appointed by the Executive Committee begs leave to present the following changes:

CONSTITUTION

Article IV. Delete "(c) the Editor-in-Chief" and change (d) to (c).

I move its adoption.

Motion seconded and carried.

THE SECRETARY: The next item is a change in By-Laws.

BY-LAWS

Chapter I. Delete Section 5 and substitute: "Honorary members shall be entitled only to the privilege of attending and addressing the meetings of the Society. Retired members shall not be subject to assessment but shall be accorded all the rights and privileges of active membership with the exception of voting or holding office."

I move its adoption.

Motion seconded and carried.

Chapter II. Section 1. Delete the words "with voice but without vote" making the sentence read "(d) the past presidents and past secretaries of the Society who shall be life members."

I move its adoption.

Motion seconded and carried.

Chapter VIII. Section 1, second paragraph. Substitute for the word "maintenance" the word "expenses" making it read "a per diem for expenses not to exceed fifteen dollars."

I move its adoption.

Motion seconded and carried.

DR. BEDELL: The president and secretary are allowed fifteen dollars a day for their expenses. They are the only ones mentioned in the By-Laws limiting their expenses to fifteen dollars a day, whereas any committeeman has no limit on his expenses. It would seem to me that in fairness to our executive officers, the president

and secretary, you might just as well delete that and say "and expenses."

Substitute motion seconded and carried.

Chapter X, Section 5, second line. Delete the word "ten" and substitute "twelve" making it read "The Committee on Economics shall consist of twelve members, including the Chairman."

I move its adoption.

Motion seconded and carried.

Chapter X. Add new Section 15, "Completion of work. In all cases where certain work is being performed or problems studied by Standing or Special Committees, such work or study shall not be considered finished when the tenure of office of such Committee ends but shall be continued by the succeeding Committee."

I move its adoption.

Motion seconded and carried.

74. Report of the Reference Committee on the Report of the Committee on Legislation

DR. MASTERSON: The first paragraph of the Report of the Committee on Legislation gives an idea of the magnitude of the work of the Committee. Two hundred and fifteen of the forty-two hundred bills introduced were of interest to the medical profession and had to be considered by the Legislative Committee. It is almost a full time job for the Chairman while the Legislature is in session.

The accomplishments of the Committee at Albany have been very satisfactory. While all the bills they favored were not passed they had considerably more success than failure.

We approve of the Legislative Bulletin being sent to all members of the Legislative Committee in each County Society. This stimulates interest in many more members in the work of the Committee.

We approve the drafting and introduction of several bills as recommended by the House of Delegates last year. This was constructive work on the part of the State Society. One of the bills introduced, the hospital and doctors lien bill, was not passed due to the opposition of the legal profession.

We express our approval of the cordial and sympathetic understanding shown by Governor Lehman and the Legislature in reference to the many bills presented affecting public health and the medical profession.

We recommend:

75. Advisory Committee to Committee on Legislation

1. That the Chairman of the Legislative Committee, with the approval of the council, be authorized to appoint an Advisory Committee of ten. This will enable every section of the state to be adequately represented on the Committee.

2. That every means possible be used to arouse the medical profession to their potential power in matters affecting public health and their profession. This can best be accomplished by individual efforts of the officers and committees of various County Societies, County Society Bulletins, and the STATE JOURNAL.

3. That efforts be made to affect more cordial relations in each county with the legal profession so that we may be enabled to secure

their support in legislation affecting our mutual interests.

4. The Committee requests the House of Delegates to express its appreciation to the Governor for his sympathetic consideration of the activities of your Committee in matters of public health and welfare.

5. The Committee also requests the House of Delegates to express its appreciation of the courtesy and consideration shown to your Committee by the members of the Legislature.

We cannot conclude this report without expressing our deep appreciation to Dr. Harry Aranow and the members of his Committee. The excellent work during the legislative session of our Executive Officer, Dr. Joseph Lawrence, merits our approbation.

DR. MASTERSON: I move the adoption of the report as a whole.

Motion seconded and carried.

76. Regional and General Anesthesia Section Section 86

DR. AMSTER OF BRONX: "WHEREAS, In recent years the study and application of regional and general anesthesia has become a highly specialized division of surgery, and

"WHEREAS, Experimental and clinical studies have been carried out in these fields and great advances in the administration of regional and general anesthesia have been made which have materially helped to reduce the morbidity and the mortality rate of poor surgical risks, and

"WHEREAS, A Special Committee of the American Medical Association has recommended the establishment of a section of Regional and General Anesthesia,

"Therefore, Be It Resolved, That a Scientific Section to be known as the Section of Regional and General Anesthesia be established as a regular section of the Medical Society of the State of New York."

THE SPEAKER: Referred to Reference Committee on New Business B.

77. State Mineral Waters

Section 88

DR. KNICKERBOCKER: "WHEREAS, There exists in various parts of the State of New York springs or wells emanating more or less vile smelling, evil tasting, variously colored waters, some of which may have therapeutic properties yet undiscovered, although man is the only form of life which up to date has imbibed them with any degree of satisfaction;

"Therefore, Be It Resolved, That the Medical Society of the State of New York go on record endorsing a state-wide survey of so-called mineral waters existing within the state, in the hope that something may be discovered which will fulfill the dreams of the late lamented Ponce de Leon."

THE SPEAKER: Referred to Reference Committee on New Business B.

78. Retired Members

THE SECRETARY: I have on my desk the names of a number of physicians who have been recommended to the Society by their respective County Societies for election to retired member-

ship. I move that the names be placed in the retired list:

Franklin W. Barrows, Dumont; Charles A. Clinton, New York; Frederick H. Ehinger, Ebenezer; Walter S. Fleming, Mount Vernon; Charles P. Gildersleeve, Brooklyn; John R. Gray, Buffalo; Silas F. Hallock, New York; Hugh Halsey, Southampton; Daniel G. Hastings, Rochester; Henry T. Hotchkiss, Brooklyn; LeRoy W. Hubbard, Mount Vernon; William A. Hulse, Bay Shore; Frederick E. Hyde, New York; Alois Jokl, Lackawanna; Annette E. Lamphear, New York; Johanna B. Leo, New York; Frederick A. Lewis, Auburn; James F. McCaw, Watertown; Forbes R. McCreery, New York; James F. McKernon, New York; Henry W. Mooney, New York; Charles D. Napier, Brooklyn; James W. Putnam, Buffalo; Max Rosenthal, New York; Wallace D. Russell, New Hartford; Joseph Anthony Sanders, Clifton Springs; Fremont W. Scott, Medina; George A. Smith, Wakefield; James Stoddart, Buffalo; Charles B. Story, Bayside; Chapman E. Strong, Long Island City; Francis Tweddell, Plandome; Emma E. Walker, New York; Horace S. Warner, New York.

Motion seconded and carried.

DR. COLIE: I would like to add as an amendment that these names be published in the first convenient copy of the STATE JOURNAL.

Motion seconded and carried.

79. Handicapped Children's Law

Sections 71-96

DR. SADLIER: "WHEREAS, The Commissioner of Health of the State of New York has asked the Medical Society of the State through its public relations committee to state whether or not it wishes an expansion of the policies of administration of the Handicapped Children's Law by the inclusion of other types of cases than now are being cared for under the workings of the law, and

"WHEREAS, It being the sense of this House of Delegates that such an expansion would be of benefit both to the indigent and handicapped child and to the medical profession,

"Therefore, *Be It Resolved*, That this House of Delegates of the Medical Society of the State of New York hereby authorizes the Public Relations Committee of the Society to confer with the Commissioners of Education and Health and to promote such expansion as may in the Committee's judgment seem wise and arrange for the care in local hospitals by local surgeons of the indigent handicapped children so far as possible."

THE SPEAKER: Referred to Reference Committee on New Business C.

The Speaker declared a recess until 8:00 o'clock P. M.

EVENING SESSION, 8:00 P.M.

The Speaker called the meeting to order at 8:00 P.M.

80. Members of Standing Committees to Attend All Sessions of the House

Section 91

DR. GOODRICH of Kings: "WHEREAS, Members of Standing Committees possess great in-

terest in and knowledge of this Society's affairs, and

"WHEREAS, In many instances they are not delegates or otherwise members of the House, "Therefore, *Be It Resolved*, That hereafter all members of Standing Committees, not already members of this House, be invited to attend all sessions of this House without voice or vote."

THE SPEAKER: Referred to Reference Committee on New Business A.

81. Gratuitous Medical Service

Section 25

DR. PODVIN: On the resolution presented by the Medical Society of the County of Kings, which reads:

"At a regular stated meeting of the Medical Society of the County of Kings, the following set of resolutions, proposed by the Committee on Medical Economics, was passed by the Society:

"WHEREAS, The Colorado State Medical Society, by referendum vote, has amended its By-Laws, as follows:

"Section 1. This Society declares that it is a right and a duty of the medical profession to determine for itself what individuals, institutions and organizations shall have claim upon physicians for gratuitous services.

"Section 2. No member of this Society may offer or give to the poor wholly or partially gratuitous medical services, other than in the traditional relationship of physician to private patient, unless the recipient of such services has first been declared eligible thereto by an agency which is engaged in social service investigation and is operating under the general supervision of, and under regulations laid down by, this Society.

"Section 3. The provisions of this Chapter shall be construed in harmony with the Principles of Ethics of the American Medical Association, and nothing herein shall be construed as superseding or amending said Principles of Ethics.

"WHEREAS, Present economic insecurity and the uncontrolled dole of free medical care now threatens the stability and integrity of the high standard of medical ethics, conduct and service of this Metropolitan District,

"Therefore, *Be It Resolved*, That the Medical Society of the County of Kings memorialize the Medical Society of the State of New York, through its Executive Committee, to give consideration to the action of the Colorado State Medical Society, and to advise the Executive Committee of the Medical Society of the State of New York that this, the Medical Society of the County of Kings, would look with favor upon similar action in New York State."

Your Committee recommends that this matter be referred to the Committee on Economics of the State Society.

I move that the report be adopted.

Motion seconded and carried.

82. Free Choice of Physicians

DR. PODVIN: Your Committee has considered a resolution from the Niagara County Medical Society introduced by Dr. Sherwood requesting

the State Medical Society to take certain action with the TERA in reference to the free choice of physician by patients being treated under welfare auspices

Your Committee feels heartily in sympathy with the motive behind the resolution but would call attention to the fact that since welfare matters are administered through county units it will be necessary for the County Medical Societies to be constantly alert in the protection of the interests of the medical profession and the public as well, rather than to depend too much upon the efforts of the State Society alone

We also feel that this may be an opportune time for the Medical Society of the State of New York to re-state the position it has always taken on this subject, and, therefore, present the following resolution

Resolved That the Medical Society of the State of New York re-affirms its position of being in favor of free choice of physician by the patient regardless of the source of compensation for medical services

Resolved, That the Medical Society of the State of New York direct the Medical Advisory Board to the TERA which will be appointed by the President of this Society to make urgent and persistent request of the TERA Advisory Commission and the director of the Temporary Emergency Relief Administration of the State of New York, to the end of securing the principle of free choice of physician by the patient in the relief work carried out under their auspices"

I move the report of the committee be accepted

Motion seconded and carried

83 Medical Reserve Officers' Training Corps Units

Section 22

DR. PODVIN Your Committee has considered the resolution presented by the Medical Society of the County of New York, in reference to the re-establishment of the Medical Reserve Officers' Training Corp as soon as possible, and recommends its adoption by this body

I move the acceptance of this report

Motion seconded and carried

84 Advertising in Foreign Language Newspapers

Section 27

DR. WARREN On the resolution presented by Dr. Kaufman of New York, which is as follows

WHEREAS, The flow of immigration into this country has been reduced to a minimum, and

WHEREAS, Those who have immigrated into this country had sufficient time, and in the majority of instances have learned the English language or have come to know their personal physician

Therefore, Be It Resolved, That the House of Delegates of the Medical Society of the State of New York express its opinion that there is no further justification for foreign speaking physicians to advertise in the foreign language newspapers, thus putting these physicians in an

advantageous position to the detriment of the non foreign speaking doctors, and,

Be It Further Resolved, That such advertising is contrary to the Principles of Professional Conduct of the Medical Society of the State of New York"

The Committee approves the resolution

I move its adoption

Motion seconded and carried

85. Open Forum

Section 26

DR. WARREN *WHEREAS*, The problems of medical economics are of great interest to the members of the medical profession, and

WHEREAS, A great many men would like an opportunity to discuss these problems,

Be It Resolved, That the Management Committee of the STATE MEDICAL JOURNAL be requested to open and conduct an open forum for the free expression of opinions on matters pertaining to medical economics"

Your Committee recommends that the matter be referred to the Journal Management Committee of the State Society for consideration

Motion seconded

DR. FRUCHT OF KINGS This resolution is very similar to one I was prepared to introduce but withheld because of the fact that this resolution was already before the House Why should we refer a matter of this kind to the Journal Management Committee? I am opposed to having this resolution referred We should have the opinion of the House of Delegates on this question

DR. ARANOW I can see no reason whatever for not deciding things like this tonight Most of the men on the Journal Management Committee have told me they can see no objection to it There is nothing radical about it, and I am sure the readers of the JOURNAL will find it to their advantage I therefore move that the original resolution be adopted

THE SPEAKER Your motion is out of order There is a motion before the House

DR. THOMSON I agree thoroughly that the JOURNAL ought to be open to all County Societies and all of the members I am afraid, however, that if we open this up wide without any control, we may have, out of a thirty-page JOURNAL, twenty-five pages of forum and no science.

A vote was thereupon taken and the motion carried approving the report of the Reference Committee

86. Regional and General Anesthesia Section

Section 76

DR. WARREN *WHEREAS*, In recent years our study and application of regional and general anesthesia has become a highly specialized division of surgery, and

WHEREAS, Experimental and clinical studies have been carried out in these fields and great advances in the administration of regional and general anesthesia have been made which have materially helped to reduce the morbidity and the mortality rate of poor surgical risks, and

WHEREAS, A Special Committee of the American Medical Association have recommended the establishment of a section of Regional and General Anesthesia,

"Therefore, Be It Resolved, That a scientific Section to be known as the Section of Regional and General Anesthesia be established as a regular section of the Medical Society of the State of New York."

Your Committee is in sympathy with the resolution and recognizes the growing importance of this special field. But as its work is so intimately carried on with surgery your Committee suggests at present that the program of the surgical section present papers on the subject as it feels are important. Therefore, your Committee disapproves the resolution as presented.

I move the adoption of the report.
Motion seconded and carried.

87. Free Medical Care

Section 30

DR. WARREN: This resolution was presented by Dr. Slavitt of Kings as follows:

"WHEREAS, The advances of modern scientific medicine have resulted in raising the cost of medical care to a degree such as to render it financially a hardship for millions and entirely unavailable for millions more, and

"WHEREAS, There is thus created the paradox of millions of our people needing medical attention and not getting it while thousands and tens of thousands of physicians and allied workers as well are able and willing to render such medical care and are denied the opportunity to do so and are, also, further denied an income to maintain an adequate economic existence and pursue a proper professional career, and

"WHEREAS, All plans, lay or medical, hitherto attempted or proposed to solve this dilemma have proved futile in meeting this serious situation, and

"WHEREAS, There is danger of ill-conceived and pernicious plans of health insurance being introduced and passed by the respective State Legislatures and even Congress,

"Be It Resolved, That this House of Delegates indorse the real fundamental solution of the problem to wit,

"1. A system of medical care free to all the people payable out of taxation, the doctors and allied workers to be employed by the municipal, county, state or federal government in this public medical service and to be compensated on a graduated salary basis,

"2. To insure a high level of scientific work that this public medical service should be carried on by the doctors practicing in groups in medical centers and institutions,

"3. The system to be operated and regulated democratically by the medical and allied professions protected by an adequate civil service system.

"4. And existing public health agencies and institutions be extended and developed to include palliative and curative medicine as well as protective medicine."

Only this afternoon the House of Delegates reaffirmed its support of the ten-point principles as presented by the American Medical Association and the present resolution is not in conformity with the ten point principles.

I move the adoption of this report disapproving the resolution.

Motion seconded and carried.

88. State Mineral Waters

Section 77

DR. WARREN: A resolution was presented by Dr. Knickerbocker as follows:

"WHEREAS, There exists in various parts of the State of New York springs and wells emanating more or less vile smelling, evil tasting, variously colored waters, some of which may have therapeutic properties yet undiscovered, although man is the only form of life which up to date has imbibed them with any degree of satisfaction;

"Therefore, Be It Resolved, That the Medical Society of the State of New York go on record endorsing a state-wide survey of so-called mineral waters existing within the State, in the hope that something may be discovered which will fulfill the dreams of the late lamented Ponce de Leon."

Your Committee disapproves the resolution. It cites the fact that there are hundreds of so-called Mineral Springs and Mineral Water within the boundaries of the State and a State-wide survey would lead to the expenditure of huge sums of money from which adequate health returns would not at this time be forthcoming. It is noted even now in Saratoga Springs that they are continuing studies to determine the benefit of the water there and know that it will take many years before that question can be fully answered. It seems then unwise to start a State-wide survey over such a broad field.

THE SPEAKER: The Chair rules the resolution out of order.

89. Mineral Waters Throughout the State

Sections 21-55

DR. WARREN: On the resolution petitioning the House of Delegates to take action requesting Governor Lehman to approve the resolution introduced to make a comprehensive study and survey of the mineral springs at Alden, Erie County; Richfield Springs, Otsego County; and Sharon Springs, Schoharie County, this matter was recommitted. Your Committee advises that Erie County tabled the matter when it was brought before it. That Otsego County delegate approve the resolution as presented. Your Committee finds that the resolution for the expenditure for \$10,000 to investigate these water places has been passed by the Assembly and Senate and awaits the Governor's signature. We are convinced that the sum for such investigation is entirely inadequate to accomplish anything of value for the purpose for which it is to be expended. We also know through the experience from the study of other water places in the State that it takes a long time to really establish the beneficial influence of these mineral waters. Your Committee therefore feels that the expenditure of this amount of money would not produce the desired result and therefore disapproves the resolution.

DR. WARREN: I move the adoption of this report.

Motion seconded and carried.

90. Report of Reference Committee on the Report of the Committee on Economics

DR. ROONEY: Your Committee has studied with much interest and admiration the report of the Committee on Economics. They have been greatly impressed with the vast amount of constructive work accomplished by the Committee and especially with the increasing spirit of liaison and co-operation with similar committees from adjoining states.

We will now consider the sectional recommendations of the report of the Committee.

Section 1 of the report indicates that numerous laws and fragments of laws regulate public and semi-public assistance for the provision of medical care throughout the state. All these have been studied by the Economic Committee and collected in a book of 125 pages. It is the opinion of your Reference Committee that the State Health laws as well as other laws applicable to medical care and the public health need rewriting, revision, and simplification and should be collated and integrated for uniformity of application throughout the state. Your Reference Committee urges the continued co-operation of the State Society with the existing Law Revision Commission of the State of New York with this end in view.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: In regard to Section 2, which refers to the Epstein Bill of the American Medical Association for Social Security, your Reference Committee approves the activity of the Economic Committee in its study of and opposition to this measure.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: Section 3 refers to the proposed O'Brien amendment to the Workmen's Compensation Law and in particular to the composition of a fee schedule for use throughout the state. This amendment has been enacted into law with provisions for the setting up of a fee schedule for the various sections of the State upon recommendations of the President of the Medical Society of the State of New York.

DR. ROONEY: Section 4 concerns itself with the various programs that have been advanced by numerous groups for the purpose of changing existing provisions for medical care and the present social order. Your Reference Committee approves the recommendation of the Economic Committee that a fundamental program, positive in nature, be drawn up based upon present standards in order to further the natural development and more universal application of health and medical service to all the citizens of the State. In line with this program the following specific recommendations have been made:

A. By means of the study already initiated by the Economic Committee to co-operate with the law Revision Commission of the State of New York as above advised for the purpose of providing adequate medical care to those who cannot obtain it at their own expense, with due compensation for the members of the

medical profession providing such care for "indigent" persons throughout the State.

DR. ROONEY: I move the adoption of the foregoing recommendation.

Seconded and carried.

DR. ROONEY: B. Your Reference Committee is in sympathy with the recommendations of the Economic Committee to integrate the entire medical profession in carrying out the functions of public health work. The health of the people is in the last analysis dependent upon the practicing medical profession. It is the belief of your Reference Committee that wherever possible the practicing physician should be drawn into all aspects of public health work and that practical public health work should be an integral part of the practicing physician's duties to be paid for out of public funds where the individual is not able to pay for it himself. We strongly recommend that all diagnostic, prophylactic, and therapeutic procedures relating to the public health be carried out as far as possible by the practicing physician who in the end must carry the burden of the maintenance of the public health, and that he be adequately compensated for such work. We further believe that closer co-operation of public health authorities with the practicing profession along these lines will greatly increase the extent and value of public health work. We further advise that due consideration be given in the proposed law revision to the foregoing recommendations.

DR. ROONEY: I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: C. and D. In reference to the suggested provision to enable those who are ill and unable to pay for medical care in part or in full, the study of the Committee is endorsed and it is recommended that the Committee further study such plans leading towards the development of a practical project.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: E. Referring to the suggestion as to provisions for meeting the financial hazards of illnesses of high cost and long duration, free from political potentialities and the possibilities of low-quality medical care, these proposals are endorsed. Your Reference Committee recommends continued study leading toward the development of a practical plan, voluntary in nature, to meet such cost of prolonged illness.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: F. In reference to the proposal of compulsory saving for all low wage earners, your Reference Committee advises the further study of this subject and the submission of a practical scheme to enable the worker in the low income brackets to put aside out of his weekly wages a certain percentage of his income to be utilized only for the real hazards of life. We reiterate the stand taken by the State Medical Society that the working people of this State should be paid an ample wage. This should be adequate to enable them to lay aside a sufficient sum over and above that

amount necessary for a reasonable subsistence (and consistent with American Standards) and to enable them to provide for themselves and families, adequate medical service.

I move the adoption of the recommendation.

Motion seconded and carried.

DR. ROONEY: Section 8, which refers to the Gieb-Vaughan plan of public health administration, is endorsed in principle. It attempts to integrate all practicing physicians in such a program with adequate compensation for the participants. Your Reference Committee recommends the adoption of a plan based upon that inaugurated by Dr. Vaughan in Detroit and as proposed by the Medical Society of the County of New York for use by the Commissioner of Health of that city in various sections of the city, and further suggests a trial of a similar plan in rural communities in New York State. Your Reference Committee further agrees with the Committee on Economics "that credit and debt" should not be permitted to build an impassable barrier between physician and patient but that as a result of the studies and recommendations of the Committee on Economics already detailed above, ways and means can be devised to set up practical and workable plans to enable the worker to pay for medical service in one way or another out of income on a cash or credit basis.

DR. ROONEY: I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: In regard to Section 13 on the study and analysis of the costs incident to the maintenance of medical practice, your Reference Committee recommends that no further action be taken at this time in this matter.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: Section 14, in reference to the listing of all positions of a public and semi-public character, part or full time, which are or should be held by graduates of medicine in the State, County, and City administrations, your Committee recommends the continuance of this study as well as the recommendations in Section 15 which refer to the study of "medicine in industry."

I move the adoption of the foregoing recommendations.

Motion seconded and carried.

DR. ROONEY: The Committee further recommends that the Committee on Economics when in the course of its work finds that conference with groups outside of the Society are necessary, that it secure the permission of the Executive Committee prior to undertaking such conferences or making any agreements thereto.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: Your Committee further recommends that the Committee on Economics devote itself essentially to a major objective and that it continue its work in depth rather than in breadth in order that the aims of the Society in the essential matters of the economic relationship of the profession be more adequately conserved.

I move the adoption of the foregoing recommendation.

Motion seconded and carried.

DR. ROONEY: I move the adoption of the report of the Reference Committee to consider the report of the Committee on Economics as a whole.

Seconded and carried.

DR. ROONEY: The Committee would like one further word.

It cannot adequately express its appreciation of the enormous amount of energy and intensity of thought devoted by the chairman of this committee and his committee.

I move that the House express its appreciation of the work of the Committee on Economics the past year.

Motion seconded and carried.

91. Members of Standing Committees Attend All Sessions of House of Delegates

Section 80

DR. PODVIN: This resolution was presented by Dr. Goodrich and is as follows:

"WHEREAS, Members of Standing Committees possess great interest in and knowledge of this Society's affairs, and

"WHEREAS, In many instances they are not delegates or otherwise members of the House, *Be It Resolved*, That hereafter all members of Standing Committees, not already members of this House, be invited to attend all sessions of this House without voice or vote."

Your Committee favors the adoption of this resolution.

I so move.

Motion seconded and carried.

92. Practice of Medicine by Aliens

Sections 18-28-60

DR. HAMILTON: Your Reference Committee has the following resolution introduced by Dr. Holcomb of Ulster:

"*Resolved*, That the House of Delegates recommend the enactment of an Act by the State Legislature to prohibit the practice of medicine by aliens until they have obtained full citizenship in the United States of America."

Your Committee feels that this resolution should be referred to Committee on Public Health and Medical Education for further study and report. It is also suggested that counsel be consulted in reference to the legal status of this resolution.

DR. HAMILTON: I move the adoption of this report.

Motion seconded and carried.

93. Child Labor Amendment

Section 31

DR. HAMILTON: The resolution introduced by Dr. Frucht, of Kings:

"WHEREAS, The Medical profession has from time immemorial professed its devotion to the service of humanity and has in particular sponsored all movements protecting the health of the young, and

"WHEREAS, An editorial appeared in the NEW YORK STATE JOURNAL OF MEDICINE opposing the Child Labor Amendment,

Be It Resolved, That this House of Dele-

gates disapproved the policy of the said editorial in reference to so important and progressive a measure."

Your Committee disapproves of this resolution because a definite stand was taken by the Executive Committee of the Medical Society of the State of New York in reference to the Child Labor Amendment as so expressed in the editorial in question.

An additional reason considered by your Committee was that the enactment of the Child Labor Amendment would allow undue power over persons of eighteen years of age and over.

DR HAMILTON I move its adoption

Motion seconded and carried

94 Hartz Article

Section 32

DR HAMILTON WHEREAS, In the issue of the NEW YORK STATE JOURNAL OF MEDICINE, March 1, there appeared an article entitled, 'Will America Copy Germany's Mistakes?' by one Gustav Hartz, and

WHEREAS, There also appeared in the same JOURNAL favorable comment upon said article quoting the author, said Gustav Hartz to be a great economist and great labor leader and

WHEREAS, The said article and comments were reprinted in booklet form and widely circulated among the medical profession of the state under the sponsorship of the Public Relations Bureau, in an effort to create a certain impression and opinion among the members of the profession on matters of vital concern to the profession, and

WHEREAS, The said article, reprints, and comments contain statements that are misleading concerning both the author and the subject matter of the article in question thereby in effect creating a misleading impression in the minds of the profession, and

WHEREAS, An examination of the said article and an independent investigation of its authorship and sources show that the said Gustav Hartz is neither a well-known economist nor prominent labor leader but is instead a contact man for special interests, and is practically unknown as an author, and is a member of a reactionary and repudiated labor organization,

"Be It Therefore Resolved, That this House of Delegates go on record repudiating the said article, its reprint and circulation"

Your Committee disapproves of this resolution for the following reason Since the Hartz article entitled "Will America Copy Germany's Mistakes?", which appeared in the NEW YORK STATE JOURNAL OF MEDICINE March 1, 1935 recorded the defects of the health insurance system in Germany and since it is consistent with the position of the Medical Society of the State of New York, in reference to health insurance we therefore disapprove of Dr Slavitt's resolution

DR HAMILTON I move the adoption of the report of your reference committee

Motion seconded and carried

95 Misinformation by Radio

Section 29

DR HAMILTON "WHEREAS, The public health is undermined by radio broadcasts, pur-

porting to impart medical information to the public, either as sustaining programs or as part of advertising campaigns, and

WHEREAS, This information is usually broadcast by non medical persons who can hardly realize the fallacies of the things they broadcast, and

WHEREAS, This leads to misinformation, which conceivably also might cause health damage to those of the listening audience who followed it,

"Therefore, Be It Resolved, That the House of Delegates of the Medical Society of the State of New York instruct our delegates to the American Medical Association to bring this to the attention of the House of Delegates of the American Medical Association to the end that suitable national legislation be enacted to obviate this evil and threat to the public health"

Your Committee wishes to express its approval of the resolution as introduced

I move the adoption of this report

Motion seconded and carried

96. Handicapped Children's Law

Sections 71-79

DR HAMILTON This resolution was introduced by Dr Sadlier as follows

WHEREAS The Commissioner of Health of the State of New York has asked the Medical Society of the state through its Public Relations Committee to state whether or not it wishes an expansion of the policies of administration of the Handicapped Children's Law by the inclusion of other types of cases than now are being cared for under the workings of the law, and

WHEREAS, It being the sense of this House of Delegates that such an expansion would be of benefit both to the indigent handicapped child and to the medical profession

"Therefore Be It Resolved, That this House of Delegates of the Medical Society of the State of New York hereby authorizes the Public Relations Committee of the Society to confer with the Commissioners of Education and Health and to promote such expansion as may in the committee's judgment seem wise and arrange for the care in local hospitals by local surgeons of the indigent handicapped children so far as possible"

Your Committee, after careful consideration recommends that the policy of promoting expansion should proceed with caution

We approve of conferences between the Public Relations Committee of the Medical Society of the State of New York and the Commissioners of Health and Education of the State of New York, to the end that in the proposed expansion the professional interest of the members of the Medical Society of the State of New York shall be amply and fully protected

An addition to the resolution was suggested to include physicians as well as surgeons, as in some instances the handicapped cardiac would thus be amply cared for

I move its adoption

Seconded

DR ROOFER I should like to suggest an amendment in line with the suggestion of the Reference Committee's recommendation that the policy of promoting expansion should proceed

with caution; that amendment would be approximately these words:

"And that no final conclusion be made by the Committee on Public Relations in relation to the proposed care of handicapped children prior to such policy having received the approval of the Executive Committee."

I so move.

Seconded.

DR. HAMILTON: The Reference Committee accepts the amendment.

A vote was taken and the motion to adopt the Reference Committee's report as amended was carried.

THE SPEAKER: Is there any other Reference Committee to report? Are there any other resolutions, new business, motions or anything else to come before this House of Delegates at this time? There being no further business before the House of Delegates the meeting adjourned until Tuesday, May 14, at 9:30 A.M.

ADJOURNED SESSION OF THE HOUSE OF DELEGATES

Tuesday, May 14, 1935, 9:30 A.M.

The Speaker called the meeting to order at 9:30 A.M.

THE SPEAKER: Gentlemen, this House of Delegates this morning is honored by the presence of a distinguished officer of the American Medical Association, Dr. Olin West.

DR. WEST: Mr. Speaker, members of the House of Delegates of the Medical Society of the State of New York: I consider it a great privilege to have the opportunity of attending this meeting and to participate in your program. I know you have very important business to transact, and I simply want to bring to you the greetings of the American Medical Association and to assure you of their entire willingness and eagerness and very earnest desire to serve the members of this organization to the best of their ability. We extend to this House of Delegates our best wishes for its continued success in carrying out the aims of organized medicine.

The Assistant Secretary called the roll, and the following Delegates responded:

Frederic C. Conway, William P. Howard, Edgar A. Vander Veer, Nathaniel H. Fuller, J. Lewis Amster, Edward R. Cuniffe, Louis A. Friedman, Vincent S. Hayward, Jacob A. Keller, William Klein, Moses H. Krakow, Edward C. Podvin, Harry I. Johnston, George C. Vogt, Joseph P. Garen, Harry S. Bull, Edgar Bieber, Charles E. Goodell, Reeve B. Howland, Earl W. Wilcox, Leo F. Schiff, Louis Van Hoesen, Charles J. Kelley, Robert Brittain, Samuel E. Appel, William A. Krieger, Aaron Sobel, James H. Borrell, Robert E. DeCeU, James H. Donnelly, Albert A. Gartner, Harry C. Guess, Edward C. Koenig, Thurber LeWin, Joseph C. O'Gorman, Harold J. Harris, Charles C. Trembley, Sylvester C. Clemans, Peter J. DiNatale, Thomas E. McQuade, Lewis P. Jones, Frank R. Henne, Charles A. Anderson, Robert F. Barber, John L. Bauer, Bernard B. Berkowitz, Thomas M. Brennan, Irving Gray, Simon Frucht, Murray G. Gordon, Edwin A. Griffin,

Charles T. Graham-Rogers, Henry Joachim, Walter D. Ludlum, Thomas A. McGoldrick, John J. Masterson, Nunzio Rini, Joseph Raphael, J. Sturdivant Read, Charles E. Scofield, Joseph Slavit, James Steele, Alec N. Thomson, Luther F. Warren, Morris Ant, F. Edward Jones, LeGrand A. Damon, Charles A. Earl, Clarence V. Costello, William A. MacVay, Willard H. Veeder, Edward T. Wentworth, Warren Wooden, Horace M. Hicks, Louis H. Bauer, Arthur C. Martin, Emily D. Barringer, Edward M. Colie, Jr., C. Ward Crampton, Adolph G. DeSanctis, Ten Eyck Elmendorf, Charles E. Farr, Julius Ferber, B. Wallace Hamilton, Alfred M. Hellman, David J. Kaliski, Samuel M. Kaufman, Frederick C. Keller, John S. Kenney, Richard Kovacs, Jacob Mandel, William M. Patterson, Morris Rosenthal, Marcus A. Rothschild, N. Thomas Saxl, James W. Smith, DeWitt Stetten, Terry M. Townsend, Harley U. Cramer, Richard H. Sherwood, George M. Fisher, Edwin M. Griffith, Andrew Sloan, John J. Buettner, William W. Street, Albert G. Swift, Homer J. Knickerbocker, Morris R. Bradner, Harwood L. Hollis, Floyd J. Atwell, Morris S. Bender, Carl Boettiger, Henry C. Courten, James M. Dobbins, James R. Reuling, Jr., Daniel J. Swan, Stephen H. Curtis, Augustus J. Hambrook, Oscar M. Race, Eugene D. Scala, George A. Leitner, Robert J. Reynolds, George S. Towne, Dudley R. Kathan, William C. Treder, David W. Beard, Paul von Haeseler, Harold W. Longwell, Herbert B. Smith, Coburn A. L. Campbell, Albert E. Payne, Ralph S. Breakey, Guy S. Carpenter, Norman S. Moore, Frederic W. Holcomb, Morris Maslon, Roy E. Borrowman, Ralph Sheldon, Fred Brillinger, William J. Doerfler, Robert B. Hammond, Arthur F. Heyl, Merwin E. Marsland, John W. Gallagher, Bernard S. Strait.

The following Officers, Trustees, and Chairmen of Standing Committees were present:

Arthur J. Bedell, Frederic E. Sondern, Andrew Sloan, Leon M. Kysor, Daniel S. Dougherty, Peter Irving, Charles H. Goodrich, George W. Kosmak, Samuel J. Kopetzky, Floyd S. Winslow, Grant C. Madill, Harry R. Trick, James F. Rooney, George W. Cottis, Nathan B. Van Etten, William A. Groat, Thomas P. Farmer, Harry Aranow, Frederic E. Elliott, James E. Sadlier, Frederic C. Conway, C. Knight Deyo, Louis A. Van Kleeck, Clark G. Rossman, Raymond G. Perkins, LeRoy F. Hollis, John E. Wattenberg, Alfred K. Bates, Richard H. Sherwood.

The following Ex-Presidents were present: Arthur G. Root, Charles Stover, Martin B. Tinker, Thomas H. Halsted, Grant C. Madill, James F. Rooney, Arthur W. Booth, Orrin S. Wightman, Nathan B. Van Etten, George M. Fisher, James E. Sadlier, Harry R. Trick, James N. Vander Veer, William H. Ross, William D. Johnson, Chas. Gordon Heyd, Frederick H. Flaherty.

Tellers

THE SPEAKER: There being a quorum present the next order of business is the election of Officers.

The Secretary announced the tellers:

DeWitt Stetten, Frederick C. Keller, William Klein, Henry Joachim, Arthur F. Heyl, Frederick Holcomb, Murray G. Gordon, Edward T. Wentworth, Joseph C. O'Gorman.

97. Officers

The following officers were elected:

President-Elect, Floyd S. Winslow; First Vice-President, Thomas H. Cunningham; Second Vice-President, James H. Borrell; Secretary, Daniel S. Dougherty; Assistant Secretary, Peter Irving; Treasurer, Charles H. Goodrich; Assistant Treasurer, George W. Kosmak; Speaker, Samuel J. Kopetzky; Vice-Speaker, James M. Flynn; Chairman of Committee on Scientific Work, William A. Groat; Chairman of Committee on Legislation, Harry Aranow; Chairman of Committee on Economics, Frederic E. Elliott; Chairman of Committee on Public Health and Medical Education, Thomas P. Farmer; Chairman of Committee on Public Relations, Luther F. Warren; Trustee, James E. Sadlier.

A. M. A. Delegates

The following were elected Delegates to the American Medical Association for 1936-1937: Nathan B. Van Etten, Frederic E. Sondern, Samuel J. Kopetzky, George A. Leitner, Carl Boettiger, George M. Fisher, Charles H. Goodrich.

The following were elected Alternates to the American Medical Association for 1936-1937:

Thomas A. McGoldrick, George W. Kosmak, James W. Smith, Harrison Betts, Julius Ferber, James R. Reuling, Jr., Floyd J. Atwell.

THE SPEAKER: Is there any further business to come before the House?

It is regularly moved, seconded, and carried that the House go on record as appreciating the work done by Dr. Conway, Chairman of the Committee on Arrangements.

On motion seconded and carried, the House adjourned sine die.

SAMUEL J. KOPETZKY, *Speaker*
DANIEL S. DOUGHERTY, *Secretary*

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EDITORIALS

Straight Thinking and Plain Talk

The State Society's flat declaration against compulsory health insurance is reassuring to practitioners who have been disturbed by the contrary pronouncements of a small but highly articulate minority in the profession. It is good for the public to know where the majority of physicians stand on a medical issue that is receiving widespread publicity from many non-medical agencies. It is important that the laity understand that the opposition of organized medicine rests, not on selfish or reactionary grounds, but on a firm conviction that the regimentation of practice by a lay bureaucracy would destroy essential elements of successful healing and retard continued medical progress.

As the incoming President, Dr. Fred-eric E. Sondern, stated in his Inaugural Address, this conviction is based on the actual experience of other nations. It is true that obligatory pre-payment for sickness constituted an advance over the low forms of contract practice which it superseded in Europe; but in no country has it produced a grade of service comparable to that enjoyed by the American worker.

From the economic viewpoint compulsory health insurance has proven a heavy burden on labor and industry alike. The administrative costs of the vast bureaucracy entailed by this system have

mounted steadily. Receipts, on the other hand, dwindle with unemployment so that benefits are curtailed in the very periods of greatest need. In the long run the care of the small wage earner is transferred from the shoulders of the well-to-do to the backs of the poor.

As for the doctor he stands to lose in every important respect. The minimum wage tends to become the average wage—and for every physician who profits financially there are many more who will see not only current income but future prospects fade. With his professional independence the practitioner loses the incentive to progress, the means of research.

There are methods of providing universal medical care which do not saddle the tax-payer with an elaborate bureaucracy or crush the profession beneath the millstone of political control. As long as the Geib-Vaughn Plan, the Pino Plan, and a score of others continue to demonstrate their efficacy, why pursue a controversial scheme which has nowhere resulted in better than second-rate service?

Insurance Against Ignorance

Last year basic science boards in nine States examined candidates for the practice of healing. The proportion of failure in various sectarian groups points a clear moral to those entrusted with educational

standards for the protection of the sick. Of the physicians tested, 11 per cent failed; of the osteopaths, 36.7 per cent; and of the chiropractors, 69.2 per cent. A remaining unclassified group of irregular practitioners saw only three-eighths of its members pass.

The high percentage of failure in the non-medical groups is not the chance occurrence of a single year. Statistics for the seven years from 1927 to 1934 tell the same story. It is apparent that none of the irregular cults give their practitioners the minimum training in the basic sciences which is indispensable to a proper approach to the problems involved in healing.

In New York State the sick public is protected against such ignorance by a Medical Practice Act which embraces any and all acts of diagnosis and treatment. Osteopathy, the only unorthodox cult permitted, is gradually dying out as the strict statutory requirements divert candidates to the broader field of medicine.

Highly beneficial though this is to the public health, each year sees new attempts to break down the barriers erected by the Medical Practice Act and permit encroachments by various cults. Osteopaths clamor for the right to perform minor surgery; physiotherapy technicians demand expansion of their privileges; and chiropractors and naturopaths seek legislative recognition.

So far the Legislature has resisted all attempts to weaken the Medical Practice Act and expose the public health to the dangerous incursions of unqualified practitioners. Each year, however, some such proposal is made; and each year there are a few misguided legislators who can be swayed by the specious arguments of quackery. The statistics of the States which hold examinations in the basic healing sciences should convince these waverers that the educational foundation of the irregular cults is inadequate for safe practice.

It is figured that about 4,000 malpractice suits are filed annually against physicians in this country.

SOCIETY ACTIVITIES

Workmen's Compensation

All County societies have been supplied with application forms for registration of physicians under the new law. It should be noted that these are so arranged as to merit typing of answers to questions.

Attention is called to the need for immediate action in order that the names may be forwarded to the Commissioner on and after July 1, 1935. The blanks should be notarized.

The fee schedule is in course of preparation on the basis of information from the various County societies.

CHAS. GORDON HEYD, *Chairman*

FREDERIC E. ELLIOTT

DAVID J. KALISKI

MEDICAL RADIO BROADCASTS

Under the auspices of the Medical Information Bureau of the New York Academy of Medicine, the following radio talks have been arranged, to be broadcast from Station WABC and the network of the Columbia Broadcasting System:

Thursday, June 20, 1:15 p.m.—Speaker: Dr. Cassius Lopez de Victoria, Assistant Director of Physical Therapy, Presbyterian Hospital. Subject: "Water Treatment."

Thursday, June 27, 1:15 p.m.—Speaker: Dr. Madge C. L. McGuinness, Chief of Department of Physical Therapy, Vanderbilt Clinic. Subject: "Exercise."

Thursday, July 4, 1:15 p.m.—Speaker: Dr. William Bierman, Lecturer, Department of Therapeutics, New York University. Subject: "Diathermy."

BETTER PAPER X-RAY FILMS NEEDED

Perfection is still to be attained by the paper x-ray films, according to some speakers at recent medical meetings. "We, as medical men," remarks the *Yonkers Medical News*, "would have little confidence in having our own children x-rayed for T. B. C. on paper films. It is a known and recognized fact that with the best types of x-ray films and apparatus, and with the best of x-ray diagnosticians, 35 per cent of the reports are in error. What can patients expect from cheap paper films, with cheap, rapid exposure; cheap, rapid diagnostic work—nothing. Don't accept cheap substitutes. Cheap not only in price but in performance.

"It is time to fight to maintain standards, not only for ourselves and reputations, but also for our patients."

No doubt the inventive geniuses of the film industry are already at work to make this economical product satisfactory as soon as it can be done.

County Societies

Erie County

Dr. Lawrence G. Hanley, "grand old man of Buffalo surgeons," recently received a token of the esteem in which he is held for his 50 years' service at Sisters Hospital when the sisters honored him at a jubilee banquet at the hospital.

At 72, Dr. Hanley still operates daily, and what is more, travels on foot the two and one-half miles to the hospital from his home at 428 Porter Avenue.

KEEN RESENTMENT was expressed at the meeting of the Erie County Medical Society on May 21 at the statement of Eugene M. Warner, Chairman of the Board of the Council of Social Agencies, that doctors were "racketeering" on relief cases. At a meeting of the Board, Mr. Warner said:

"A racket is being worked by certain individuals in capitalizing on relief cases. It is apparent that efforts have been made by certain doctors or their friends to steer relief clients to them."

Mr. Warner said he was amazed at the tremendous fees which some physicians had made since the first of the year. He cited instances where physicians had submitted claims to the ERB for more than \$1,000 in a single month.

Further, Mr. Warner pointed out a case of where one physician made 37 calls in one day on relief clients.

On the basis of present remuneration, these physicians would be receiving more than \$10,000 annually for medical services to county relief clients.

Mr. Warner offered a resolution to restrict payments to individual physicians to \$250 a month.

Members of the County Medical Society declared that they would ask Mr. Warner officially for specific instances of "racketeering" or an apology.

Indignation also greeted the report of the Economics Committee that the Buffalo ERB had rejected the Society's proposal of a fee schedule for city doctors attending relief cases. This plan, approved in a resolution at its January meeting, provides that city physicians be reimbursed for welfare cases at the rate of \$1 an office call, \$2 a house call, and \$25 for obstetrical cases, the rates prevailing outside the city.

Dr. John L. Hoffman, Chairman of the Economics Committee, said:

"I don't think that anyone realizes what the doctors are doing for the city of Buffalo at the present time. In the fiscal year

ending with 1934, the doctors contributed free medical service in 4,600 medical cases, 8,900 surgical operations, 1,700 delivery cases, and 40,000 outpatient cases.

"We do this sort of thing, and yet the city ERB tells us it can't do anything for us."

Earlier in the session, the members approved a group hospitalization plan recommended by the economics committee. The plan, which has been worked out by the Hospital Council of Buffalo, composed of the local private hospitals, guarantees a ward bed for 21 days on payment of \$9 a year; and a bed in a semi-private ward for 21 days on payment of \$12 a year.

Franklin County

The regular semi-annual meeting of the Medical Society of the County of Franklin was held in the John Black Room, Saranac Lake, May 8, 1935. Officers present were: President, R. G. Perkins; Secretary-Treasurer, G. F. Zimmerman; Censors, McCarthy, Woodruff, Morse. Members present, twenty-three. Visitors present, four.

The following nominations were made for 1936: president, E. N. Packard; vice-president, Daisy H. VanDyke; secretary-treasurer, G. F. Zimmerman; censor for three years, E. M. Austin; delegate to New York State meeting, C. C. Trembley; alternate, J. E. White.

Dr. K. A. Tulloch of Malone was admitted to membership.

The new Workmen's Compensation law as applied to physicians and surgeons was widely discussed as to its interpretation. A motion was made by Dr. de Grandpre, seconded and carried, that a committee be appointed by the President to review the qualifications of the doctors of Franklin County desiring to treat Workmen's Compensation cases, this committee to consist of a physician and a surgeon from each of the three county centers—Saranac Lake, Tupper Lake, and Malone. Two members of this committee are to serve one year, two to serve two years, and two to serve three years.

Dr. Trembley of the Legislative Committee gave a résumé of the recent State legislation as it affected physicians. It was moved by Dr. Dolphin, seconded and carried, that a committee composed of Dr. Trembley as Chairman, and three others, named by the Chairman, draw up a questionnaire to be submitted to the doctors of Franklin County to elicit information to-

ward promoting the infant and maternal welfare of the County

Motion was made and carried that the Secretary draw up resolution of condolence in the death of V S Worden, psychiatrist of Syracuse Lake, and mail a copy to his widow

Scientific session "Opiate Addiction, Its Successful Treatment," by Dr Eugene N Boudreau Syracuse Discussed by Dr William Ladue, Plattsburg Adjourning

Kings County

A reception and tea was held May 21 by the recently organized Women's Auxiliary to the Medical Society of the County of Kings in the society's Library Building, 1313 Bedford Avenue Mrs John L Bauer, president, greeted the members and presided at a brief business meeting prior to the tea

The women's unit will begin its active program on October 8 At present it in cludes 100 members

The officers, in addition to Mrs Bauer, are Mrs E A Griffin, first vice president, Mrs James Steele, second vice-president Mrs Irving Sands, secretary, Mrs Fedor Seuger, associate secretary, Mrs Jiques Rushmore treasurer, Mrs Thomas Wood associate treasurer, Mrs Luther Warren Mrs Walter Ludlum, Mrs Alec Thomson, Mrs Charles Gordon Mrs S Lloyd Fisher, and Mrs John McCabe, directors

Monroe County

A testimonial dinner to Dr Floyd S Winslow, president-elect of the Medical Society of the State of New York will be given June 20 at the University Club in Rochester by the Monroe County Medical Society

ACCORDING to the Rochester papers, "serious bespectacled Dr Willard M Allen toyed selfconsciously with a glass of water last night while colleagues and former instructors praised his genius in the field of biochemistry"

The 30 year old member of the University of Rochester Medical School staff was guest of honor at a testimonial dinner given May 16 by the Rochester Section of the American Chemical Society at the University Club

Prominent members of the city's medical profession colleagues from the Medical School, Dr Murray Bartlett, president, and other faculty members of Hobart College paid tribute to the youthful scientist for his recent discovery of "Progestin," a female hormone being experimented with in the treatment of human sterility

Back over his life the speakers went to reveal he was a winner of a better babies contest in his youth, a leading student in college years, and later a genius to whom everything came easy

Responding, Doctor Allen tore down this little Lord Lantlos picture with the admonition he once nearly set fire to the barn on his farm home And there were all those years through high school that he played pool for money, he declared

New York County

Activities of the Physicians' Wives League of Greater New York during April included allowances of \$267 to regular monthly recipients, 15 for monthly scholarship, study of two old cases requiring financial aid, study of several new calls for relief and aid to a doctor about to be evicted A \$300 yearly scholarship is to be given a 20-year-old dental student

Onondaga County

The Medical Alumni Association of Syracuse University enjoyed a rich program at their reunion at commencement on June 3 and 4 The list of subjects and speakers is too long to give here The reunion closed on the evening of the 4th with a supper and medical minstrel show at the Syracuse Hotel

Ontario County

Canandaigua has been selected for the annual meeting of the Seventh District Branch, New York State Medical Association

An all day session to be attended by more than 200 physicians will be held Thursday, September 26 in the U S Veterans' Hospital

Dr Alfred Bates of Auburn is president of the Seventh District Association which embraces the counties of Ontario, Monroe Livingston Wayne, Yates Seneca, Cayuga and Steuben, Vice presidents are Dr W W Maloney of Geneva and Dr Alfred W Armstrong of Canandaigua

Queens County

The Woman's Auxiliary of the Medical Society of the County of Queens now has over 200 members and the list is increasing steadily

Washington County

The semi annual meeting the Medical Society of the County of Washington was held at Whitehall on May 14, with 18 members and five visitors present, according to a report from Dr S J Banker Commis-

sioner Hicks, of Granville, spoke on the hospitalization of welfare cases. He asked if a method in reducing the expense could be found. Dr. Borrowman stated that he had examined the accounts and they seemed to him, to be legitimate, and he also suggested that an extension to the County Home at Argyle be made.

The Comitia Minora minutes were then read. It was suggested that at the Annual Meeting we give power to the Comitia Minora to change the date of the Semi-Annual meeting.

Dr. Leonard's report was read by the president. In it he recommended that a resolution be made authorizing the president to appoint a committee of three to serve as an authorizing board for the County. He also believed that the president be authorized to make appointments for a Grievance Committee when such a committee is required. These suggestions were adopted. Dr. Bailey read the law and discussed it thoroughly.

The following resolution was made by Dr. Borrowman and adopted: "That the Secretary of this society communicate with the secretary of the society of the State of New York, asking that an official opinion be requested from the Attorney General's office in Albany regarding the legality of the Public Health Officer being authorized to do Welfare Work."

Dr. Borrowman suggested that the secretary send a questionnaire to all doctors asking them what their qualifications are, to do compensation work.

The following candidates were presented and duly elected: Vernon K. Irvine, Granville; William B. Nuzzo, Hartford; Elias Walrath Young, Cambridge; Cornelius Mezey, Comstock.

Dr. Tillotson read a paper on "A Summary of Obstetrics in General Practice." Dr. Banker discussed this paper, presenting cases that occurred during the influenza epidemic in 1918.

Following dinner Dr. Farrell gave a very interesting paper on "An Unusual Case of Rat Poisoning Fever." The treatment consisted of neosalvarsan. The disease would continue indefinitely unless this treatment was given.

Dr. John P. J. Cummings of Ticonderoga gave a talk on "The Treatment of Difficult Fractures." He showed much ingenuity in the management of these cases.

Dr. Carl Boettiger, visiting physician and Director of Laboratory at St. John's Hospital, Long Island City, gave a paper on the "Classification and Treatment of Anemia." This was illustrated by lantern slides, and proved to be interesting and practical.

Westchester County

More than 350 doctors and guests attended the annual banquet of the Medical Society of the County of Westchester on May 21 at the Wykagyl Country Club, New Rochelle. A golf tournament was held in the afternoon.

Dr. E. B. Sullivan of Mount Vernon won a silver cup for the low gross score. Dr. Henry B. Wightman of New Rochelle had low net and selected a full physician's bag.

Other golf prize winners were Dr. Oscar J. Mink of Hastings, Dr. A. F. Angello of Mount Vernon, Dr. Walter L. Scott of Yonkers, Dr. H. C. Hancock of Port Chester, Dr. G. E. Jamieson of Bloomingdale, White Plains; Dr. C. A. Cerchiara of Mount Vernon, and Dr. R. A. Higgins of Port Chester.

Dr. Harrison Betts of Yonkers presided over the banquet as president of the society. He introduced Dr. Frederic E. Sondern, president of the Medical Society of the State of New York. Others at the guest table were Dr. L. H. Bauer of Garden City, who invited the Westchester doctors to a dinner of the Nassau County Society on September 29; Dr. Terry M. Townsend, president of the First District Branch of the State Society, including New York City, Westchester and five other counties; Dr. Joseph Lawrence, executive officer of the State Society; Dwight Anderson, director of the Public Relations Bureau of the State Society; Dr. William V. P. Garretson of Rye and Dr. Benjamin I. Ashe of New York.

DR. ISADORE ZADEK, associate surgeon in orthopedics at the Mount Vernon Hospital, was elected president of the Mount Vernon Medical Society at an annual meeting on May 15 at the Siwanoy Country Club, Bronxville. He succeeds Dr. Alfred C. Emmel.

Other officers elected were Dr. E. B. Sullivan, vice-president; Dr. William J. Van Wie, secretary; and Dr. William A. Randel, treasurer.

Dr. Zadek is a graduate of Johns Hopkins Medical College. He is a member of the American Medical Association, a fellow of the American College of Surgeons and a members of the New York Academy of Medicine.

The annual meeting followed a dinner and a golf tournament between the local doctors and dentists. They tied at 13½ points each.

After dinner Floyd Hynes presented vocal and piano numbers and Dunsworth, the Magician, gave an exhibition. About 50 doctors and ten dentists were present.

AN UNUSUAL OCCURRENCE OF THALLIUM POISONING**Seven Members of a Family Affected With Five Fatalities, With Diagnosis Established by Means of Spectroscopic Analysis****JOSEPHINE B NFAL, M D, EMANUEL APPELBAUM, M D, L EDWARD GAUL, M D, AND ROLLO J MASSELINK, M D***Division of Applied Therapy Bureau of Laboratories Department of Health
NEW YORK CITY*

Early in April attention was called to three deaths in one family which were tentatively considered to be due to encephalitis following varicella. When it was learned that four other members of the family had developed signs and symptoms suggesting encephalitis, Dr John L. Rice, Commissioner of Health of New York City, requested that the situation be investigated.

It was found that the family consisted of eight members, three adults, and five children. The five children had recently recovered from varicella. The two adults who became ill had not had varicella or herpes zoster.

On March 28, 1935, T G, a boy 9½ years old, suddenly vomited, complained of fatigue, and died within a few hours. On March 29, 1935, L G, a boy 3½ years old, became irritable, later drowsy, refused to eat, and developed weakness of legs. He was admitted to Kingston Avenue Hospital the same day. On examination he had weakness of legs, exaggerated reflexes, and an essentially normal spinal fluid. He died on April 2. Necropsy showed bronchopneumonia and marked congestion of the brain in the gross. Specimens of this brain, examined by Dr Lewis D. Stevenson, were subsequently reported as showing no lesions suggesting encephalitis nor any meningeal or vascular abnormalities. The mother, C G, age 38 years, on March 29, 1935, developed numbness and weakness of arms and legs, facial palsy, and difficulty

in talking and swallowing. She was taken to the Bushwick Avenue Hospital, April 1, and died April 3. Necropsy was performed. She was found to be in the fifth month of pregnancy.

C G, a girl 7 years old, had varicella late in February, 1935, and two weeks before the other children developed this disease. She recovered from the varicella in the usual time and was well until April 7, 1935, when she became drowsy, refused to eat, developed pains in knees and feet, and the scalp hair began to fall out. She died at the Kings County Hospital, April 27, 1935. Necropsy was performed.

B G, a girl 1½ years old, on April 7 became drowsy, unable to walk, and developed a generalized tremor, and loss of hair. She died at the Kings County Hospital on April 27. A necropsy was performed.

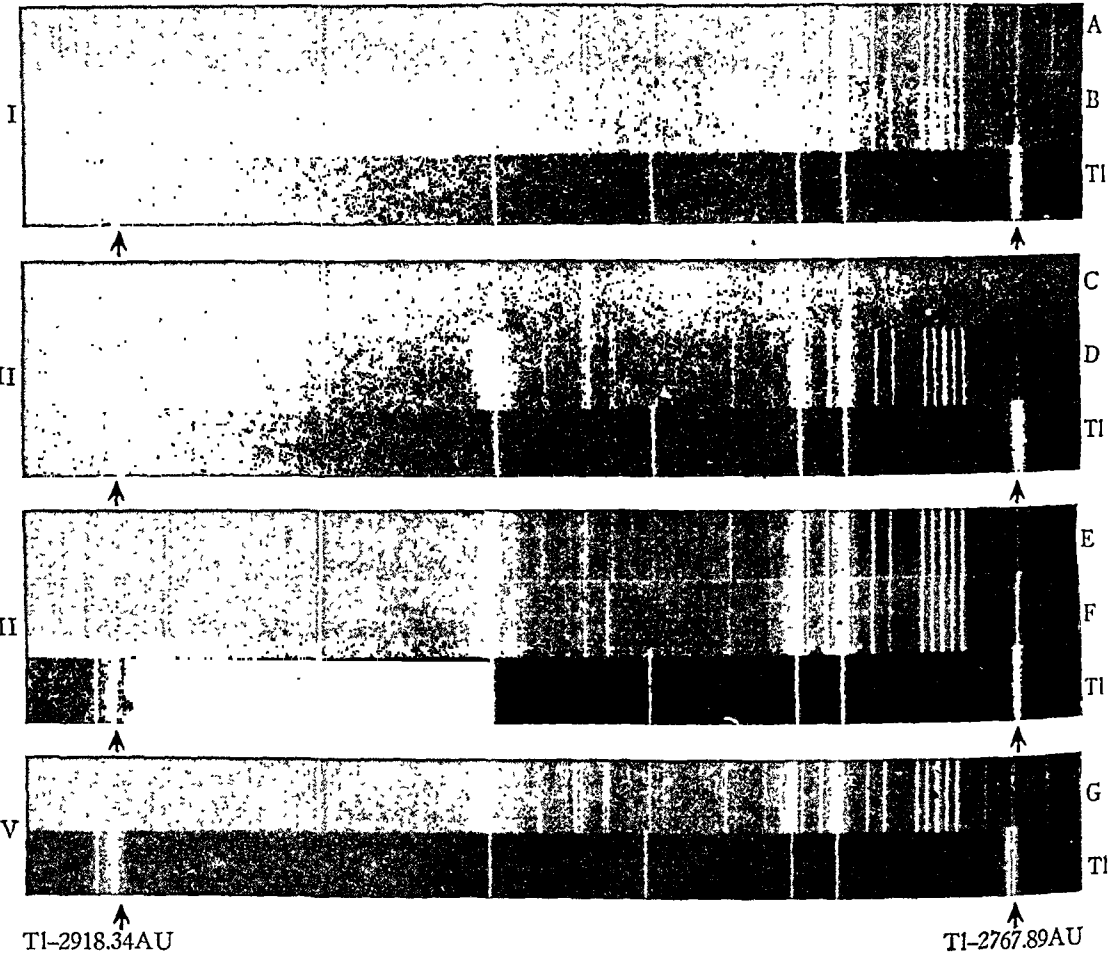
O B, maternal grandmother, age 67, confined to bed most of the time since March 29, 1935, complained chiefly of numbness of the hands, followed by generalized weakness particularly of the extremities, transient periods of blurring of vision and of blindness. Vomiting occurred at times. There was also difficulty in articulation and lapses of memory, and loss of scalp hair. She had been in Bushwick Hospital since April 30 and was markedly improved on May 3. Deep reflexes were absent on admission but were returning, superficial reflexes were normal as were the pupillary reflexes.

The only laboratory finding of significance was that on April 30 she had an eosinophilia of 14 per cent which had dropped to 5 per cent on May 2.

F. G., male, age 5 years, became suddenly ill on April 4, 1935, with irritability, apathy, somnolence, and constipation. He was admitted to Kingston Avenue Hospital on the same day. On admission he showed moderate signs of meningeal irritation, exaggerated deep reflexes, and slight papilledema. On April 14 he developed tremor of the hands and began to lose his scalp hair. On April 16 he developed weakness of

the legs and trunk muscles and tremor of the head. Physical examination April 17, 1935, revealed slight paresis of the muscles of trunk, arms, and legs. There was an irregular, coarse generalized tremor. Deep reflexes were exaggerated and the abdominals absent. The fundi were normal. No signs of meningeal irritation and no pathological reflexes were found. There were no sensory disturbances. The alopecia was marked. Laboratory findings were negative except for a slight leukocytosis. The spinal fluid was clear, 8 cells, all mononuclears; protein 43.5 milligrams; sugar normal; spinal fluid

FIG. 1. SPECTROGRAMS OF NECROPSY SPECIMENS



I. A, cerebral cortex, B. G.; B, spinal cord, C. G.—mother. Tl, thallium control. II. C, graphite control, D, skin specimen, B. G., Tl, thallium control. III. E, cerebral cortex, L. G.; F, cerebral cortex, C. G. (daughter), Tl, thallium control. IV. G, Liver, C. G. (mother), Tl, thallium control. For thallium lines in specimens see arrow.

necropsy specimen was burned on high purity graphite electrodes in 110 volt D. C. arc operating on 5 amperes. Spectrograms were photographed in juxtaposition to facilitate the positive identification of the thallium lines (2918.34 A.U., and 2767.89 A.U.). Additional specimens (C.G., mother) consisting of kidney —right, vagina, uterus, bladder also gave a positive test for thallium.

NOTE: Approximately 0.15 gm. of each

Wassermann negative. When seen on May 3 his general condition was slightly improved. Subsequent history given to us by Dr. S. D. Lazarus revealed that this child, as well as the other patients, had gingivitis at the time of onset of symptoms.

This unusual illness affecting seven members of one family seemed to us most unlikely to be encephalitis following varicella. This was further borne out by the varying time relationship to the varicella, the absence of varicella in the mother and grandmother, the practically normal spinal fluid and the absence of fever. Moreover, the development of alopecia in so many members of the family suggested the possibility of thallium poisoning. In order to prove or disprove this diagnosis, specimens were obtained for spectroscopic examination.

Skin biopsies from patients F. G. and O. B. taken on May 3 failed to show the presence of thallium. Thallium was demonstrated by spectroscopic examination in the brain and skin of B. G.; in the brain of the child, C. G.; in the spinal cord, liver, kidney, vagina, uterus, and bladder of the mother, C. G.; and in the

brain and liver of L. G.

Spectroscopic examination of the kidney and liver of the fetus failed to show the presence of thallium.

See Figure 1 for thallium lines in certain of the specimens.

This group of cases is of unusual interest in that seven members of a family of eight became ill, with five fatalities. The clinical signs and symptoms were diagnostic of thallium poisoning in the two patients who survived, even though thallium could not be detected in the skin biopsies obtained about a month after the onset of symptoms. It is probable that the thallium had been eliminated at that late date. Thallium was demonstrated by spectroscopic examination in various tissues of the four fatal cases from which specimens were obtained at necropsy.

The authors express thanks to Dr. Victor Caronna and Dr. Louis Nightingale of the Kingston Avenue Hospital and to Dr. Jacob Werne and other members of the staff of the Bushwick Hospital for their kindness in giving detailed histories of the cases and in supplying specimens from the various necropsies.

45 GRAMERCY PARK

WARNING OF A PROWLING DRUG ADDICT

Attempts to secure narcotics illegally are being reported from various parts of the State to Supervisor Frank J. Smith of the Department of Narcotic Control at Albany. He writes:

"On May 23 at a meeting of the Geneva, N. Y., Academy of Medicine, several physicians reported attempts by someone whom they supposed to be an enforcement agent to secure narcotics. Due to the circumstances of the attempts the writer expressed the opinion that they were being made by someone other than an enforcement agent, quite likely a drug addict.

"On May 29 Trooper Manning of the New York State Police at Newark, N. Y., reported the same sort of attempt against a physician, and in Clyde, N. Y., the same attempt was made on a pharmacy. In each instance the circumstances generally represented an emergency arising through a railroad accident or a passenger seriously ill aboard a train. The attempt was made to secure a small amount of narcotics in addition to a few other items obtainable from a physician or pharmacy. Each time a check for \$5 was presented in payment, and the person appearing in response to the tele-

phone call secured the narcotics and other materials, and the change.

"The person making the attempt has been described by the State Police as a man 45 years of age, 5 feet 10 inches tall, weighing 160 pounds, brown hair.

"Warrants have been issued for violation of Section 1202-A of the Penal Law, and an additional charge may be made for violation of Section 438-A of the Uniform Narcotic Act, Public Health Law of New York State.

"This office has advised a number of the pharmaceutical groups and their publications in this State, and the writer felt that you might be interested in advising your subscribers so they may be protected."

Her husband being slightly indisposed, the young wife tried to take the patient's temperature, and in a state of great excitement scribbled this note to the doctor:

"Dear Doctor: Please come at once. My husband's temperature is at 136 degrees."

The physician replied:

"Dear Madam: The case is beyond my skill. Send for the fire engine."—*Nebraska State Medical Journal.*

SOME PSYCHIATRIC ASPECTS OF PHYSICAL DISEASES

GERALD R. JAMEISON, M.D.

Clinical Director, Bloomingdale Hospital

WHITE PLAINS

Though there are numerous aspects of the relationship of psychiatry to general medicine, this article will be confined to a selected group of cases in which a physical disorder apparently played an important rôle in the development, course, and prognosis of a serious mental illness.

However, in order to define clearly the present discussion it seems wise at first to point out that frank mental diseases are divided grossly into two groups: Organic and functional. The former consists of those disorders in which the symptomatology, from a causal viewpoint, is intimately related to an organic pathology of the brain. Cases of senile deterioration, cerebral arteriosclerosis, brain tumor, and neurosyphilis are common examples. Likewise in this group are included patients whose mental disorders are directly attributed to exogenous factors, such as alcohol and drugs. Other patients not included in the above, such as deliria with fever of one kind or another, or exhaustion reactions showing mental symptoms, are classified in the somatic disease group.

The clinical picture of the *acute* reaction of any of these organic conditions is quite characteristic. There are considerable restlessness and moving about, true confusion, and varying degrees of irritability and apprehensiveness. The mood varies as the individual's temperament varies, while the mental content or trend is often related closely to the individual's everyday life. The typical defects, however, are found in the patient's sensorium and mental grasp. Here, depending upon the severity of the reaction, are found defects in the temporal, spatial, and personal identifications. As the patient's attention varies, and his level of awareness fluctuates, such defects of sensorium likewise vary. At the same time the memory will be found to be impaired and the intellectual capacity affected. Visual and auditory hallucinations are frequently present, and at times a true occupational delirium may occur. The whole reaction

is characteristically more intense at night. This then, in varying degrees of severity, is what is called the organic reaction type. Etiology is usually definite, and classification and treatment are quite clear-cut.

The second great group of mental diseases, namely, the functional, is made up largely of schizophrenias, manic-depressive reactions, and severe neuroses. It is not appropriate or necessary to enter into any detailed discussion of these, but it might be emphasized at this time that although we know a great deal as to the background and setting in which *these* illnesses occur, together with much that is of psychological significance, the true causal factors are still very obscure. Nevertheless there is much that may be done in prevention and treatment.

Many of the so-called functional states, at least by the time the patients have entered a hospital for treatment, have symptoms of somatic nature. A slight elevation of temperature, a varying degree of leukocytosis, and usually loss of weight are quite commonly seen without demonstrable cause. Again there are others who seem acutely ill physically, so ill in fact that the underlying primary functional disease is temporarily hidden by the organic features. The question is, therefore, often raised as to whether any important relationship exists between the physical and mental disturbances, and if so, what is this relationship?

Report of Cases

With this in mind brief discussion of three cases is presented, in which a physical disease has appeared to be either the precipitating factor, or at least has played an important rôle in the development and course of what otherwise seems to have been a functional psychosis.

CASE 1. Our first patient, a married Jewish woman of 23, was admitted to the hospital in a dehydrated, toxic, emaciated state. She was approximately 40 pounds underweight. A month previous to admission a therapeutic abortion had terminated

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a four months' pregnancy. Mentally there was great restlessness and overactivity, with profane exclamations and screaming. She was entirely out of contact with her surroundings. Her legs were rigidly flexed and could not be extended.

The family history showed a number of maternal relatives subject to depressions and elevations of mood. A sister had a frank manic-depressive psychosis.

Her personal history was significant. The oldest of 3 children, she weighed 5½ pounds at birth. During infancy she was thin and of sallow complexion. Her mother could not nurse her. She had scarlet fever at the age of 2; later measles, chicken pox, and German measles. Because of her frail health tonics were prescribed. She was petted a great deal and became her mother's favorite. The attachment was mutual. Her menses began at 12, and continued regularly and without complication. At the age of 19 she married, and a year later gave birth to a healthy child without difficulty.

Her personality was that of an accomplished, intellectual, but somewhat emotionally-unstable individual. She finished college at the age of 18. She was sociable, outgoing, and had many friends. However, she was inclined to worry, was somewhat sensitive, did not unburden freely, and chafed much under her mother's solicitude. She seemed fairly happy after her marriage to a man some years her senior, although he gave her little of the sympathy and attention she had formerly received from her own family. The history indicated that the patient was mildly depressed before her marriage, and that following it there was a noticeable elevation of mood which was probably pathological, the change lasting for several months.

Her present illness seemed definitely associated with the onset of a second pregnancy occurring 5 months before her admission. She rather abruptly became quiet and somewhat pessimistic. She did not disclose her physical condition to her mother, although she wrote her short notes at intervals. During the second month of her pregnancy, early morning nausea and vomiting became quite severe. By the end of the third month she had lost 35 pounds in weight, and was seen by a physician for the first time. Her husband resented the physician's advice, believing that his wife could control much of her distress if she wished to, but she was finally taken to a general hospital where under temporary attention her physical health improved, although there was little change in her mood. There was some albumin in her urine and a few casts. After she returned

home during the fourth month of her pregnancy, her depression lifted rather abruptly and she became elated. She soon exhibited a great deal of energy; she made extravagant expenditures, including long distance telephone calls to friends and relatives; she visited many people, talked of being a successful writer and started one thing after another, rarely completing anything. She had little time for eating or sleeping. Her physician attempted to slow her down with sedatives, with little effect. She was soon physically exhausted. A therapeutic abortion was then performed. For 10 days she ran a temperature of 101 to 103. Morphine and hyoscine were freely administered, and also large doses of sulphonal, but her restlessness and overactivity became more intense, and finally she was so distract that she would not eat and it was necessary to tube-feed her. A secondary anemia developed. Albumin and granular casts, with some pus and red-blood cells, appeared in the urine. She became so noisy and delirious that a mental hospital was recommended.

On admission she appeared physically in poor condition. Her face was pale and drawn, her eyes sunken, and her lips dry and cracked. There was slight elevation of temperature with a rapid pulse. Blood pressure, 110 systolic; 50 diastolic. Her chest and abdomen were negative. Gynecological examination was negative. Blood cytology was not remarkable; hemoglobin, 72 per cent, with an increase of blood urea and uric acid. Widal, blood cultures, and stool examinations were negative. Urine showed a high specific gravity, a slight trace of albumin, but no casts. Spinal fluid was negative. Positive neurological findings included gross tremors of the extremities, a hint of wrist drop on the left, double foot drop, and absent knee and ankle jerks. Her legs were in an acutely flexed position, and there was considerable atrophy of the muscles. She seemed to be in pain when she moved. Her legs could not be straightened. Cutaneous sensation could not be tested at that time. X-rays of the knee joints were negative except for slight atrophic changes. Mentally she was noisy and excited. She appeared fearful and tense. Her body swayed rhythmically from side to side. Her talk was profane and flighty. The following is a sample: "Get out of here, you louse! Who is in this house? I don't care about my mother. She is a bitch. I am not drunk. Pass around the cocktails. I must be respected. Oh! oh! get away! What is it? No, I won't!" and so on. She was quite disoriented and her memory was obviously defective.

Course in Hospital. For the first 6 weeks in the hospital she was quite out of touch with her surroundings, and was artificially fed. Intravenous administrations of glucose and saline at intervals were beneficial, and her elimination was carefully managed. Her temperature remained around 100°. She slept little at first, but no sedative medication was given. With warm packs and baths her sleep was eventually restored. Her legs remained acutely flexed, and efforts to straighten them resulted in severe pain. At the end of 3 months, with the exception of the paralysis of her legs, her physical health had improved considerably. Mentally she now showed a rather characteristic manic picture. Her mood was one of elation. Her talk was distract, with some flight of ideas, and she was quite alert to what was going on about her. Three months later her elevation of mood had subsided, and the antagonism she had expressed toward her family while she was elated had disappeared. At this time, under a general anesthetic, her legs were forcibly extended and a plaster cast applied. There was no true shortening. About this time she became mildly depressed. Eight weeks later the cast was removed and massage was started. Deep reflexes had returned. She left the hospital 10 months after admission in good mental and physical health, although she did not walk without some assistance. Three years later she was reported living at home entirely well.

Comment. Early in life this patient was frail and sickly. The tendency to mood disorders was prevalent on the maternal side of the family, and a younger sister had a frank manic-depressive psychosis. The patient herself was somewhat unstable emotionally and subject to mild mood swings, and at the time of her marriage she apparently had a minor depression with a reactive period, when she was moderately elated. At this time she married a man considerably older than herself, thus obtaining a separation from her mother which she had undoubtedly long desired. It will be recalled that, while she seemed quite close to her mother, her underlying antagonism and hatred, consciously covered over when she was well, when sick, broke through in vituperations against her mother.

For a year following her marriage she had been happy, and she passed through her first pregnancy uneventfully. Her second pregnancy was ushered in by severe nausea and vomiting. Shortly thereafter a certain mental inertia and

despondency developed, and her physical health rapidly showed a serious reduction. Her husband's early neglect and indifference to obtaining proper medical attention intensified the reaction. When first seen by a physician her depleted physical health was attributed to her pregnancy, and the significance of her lowered spirits was not recognized. When the depression changed to an elation her physical health was further compromised and a delirium ensued. This was finally accepted as a toxemia of pregnancy and a therapeutic abortion was performed. Efforts to control her disturbed state, which continued after the operation, by the use of many and varied sedatives, brought little relief. In fact a vicious circle was created: the more disturbed she became, the more sedatives she received, and these in turn increased her toxemia. The functional aspects of her illness were then entirely concealed, as were the neurological complications.

The inter-relationship of the various factors is seen clearly enough in retrospect, and it may seem presumptuous to comment that a proper evaluation of this woman's background and personality tendencies might have resulted in a greatly modified mental reaction. Her previous mood reactions had been mild and not incapacitating. The initial phase of the present attack, a depression with apathy and listlessness together with marked loss of weight, was attributed to her pregnant state. Later when signs of a toxemia developed the delirium was regarded as entirely organic, whereas much of her behavior was then due to a rapidly developing mania. The abortion was undoubtedly necessary, but physical as well as psychological factors were again added.

The essentials of the picture, viewed longitudinally, are those of a functional mental disease, but, from the standpoint of intensity of reaction and appropriate treatment, the emphasis in the hospital for many weeks was predominantly upon the physical condition. In reviewing her history it seems reasonable to say that early evaluation of the various factors in her life history might have led to a better understanding of the possibilities for early treatment so that the prolonged course and almost fatal outcome of her illness could have been avoided.

CASE 2. Our second patient, a married woman of 48, was admitted to the hospital in the spring of 1932, with a severe cardiac decompensation. She was acutely disturbed mentally, with visual and auditory hallucinations, and a mild paranoid trend.

The *family history* showed that 3 of the grandparents and an aunt had had heart disease. Of importance also was the fact that two siblings and an aunt had had psychoses, from which one did not recover.

In the *personal history* it was noted that the patient, the third of several children, had had a happy and natural childhood. Her menses were established at 13, and had continued regular and without complication until the menopause at the age of 45. She finished normal school at 21 and taught successfully for 5 years, when she married a conscientious and brilliant professional man. There were 2 children, the older 21, the younger 17, at time of admission.

In childhood and adolescence there was little evidence of physical disease, but from the age of 25 on she had had frequent attacks of tonsillitis. Her tonsils were never removed. At the age of 30 she had a temporary illness diagnosed as "rheumatism," and 3 years later an attack of "shakiness" diagnosed as chorea. For the next 16 years there was no evidence of a physical disorder, and the heart condition was not recognized until a definite cardiac decompensation occurred 3 months before she came to the hospital.

Her *personality* was characterized by considerable push and tension. Much attached to her family, she worried easily about her children and tried to keep them close to her. At the same time her energetic drives kept her in many civic, social, and religious activities. These latter interests increased as she entered the menopause. She had always been reserved, prudish, and modest in her sexual life, but some time before admission there was a period of unusual sexual activity and curiosity, much out of keeping with her usual attitude. It was about this time also that her church activities brought her into contact with an erratic religious worker whom she came to idealize to the point where his picture occupied a conspicuous place in her home. She often took long and vigorous walks with him until he left town just before she became ill.

Three months before admission, following a strenuous shopping tour, she complained of shortness of breath and flushing of the face. Physical examination revealed a mitral lesion with cardiac insufficiency. The heart rate was 150, with auricular fibrillation. The diagnosis was confirmed by an electrocardiogram. She was put to

bed and digitalized. After two weeks in bed it was difficult to keep her quiet and she was soon up and about again. She was now more affectionate toward her husband, remained interested in him for a time, but worried somewhat about an impending operation for circumcision upon her younger son. Three weeks before admission, while awaiting news of this operation, she suddenly collapsed. She felt weak and exhausted, talked of being mixed up, said "the nerve of responsibility" had snapped in her head, and asked her husband to cut her head off. She became noisy and talked about confessing something. She held her body rigid at times, showed erotic mannerisms, and thought she heard the voice of the religious worker for whom she had had such an attachment. She ate and slept poorly, and was given many hypnotics before she came to the hospital.

Physical Status. On admission she appeared toxic and dehydrated. Her lips, tongue, and mouth were dry. The tonsils were buried. The heart was enlarged, with a mitral stenosis and insufficiency. Auricular fibrillation was present. There was a pulse deficit, with irregularity in force, rate, and rhythm. There was congestion at the bases of both lungs, some enlargement of the liver, and edema of the ankles. The blood pressure was 125/72. Urinalysis and other laboratory data were negative.

Mentally she was overactive, thrashing about in bed or assuming erotic poses. She smiled and giggled at times; again would be angry and defiant. At intervals a certain anxious, apprehensive mood appeared. She was influenced by auditory and visual hallucinations. She heard the voice of the religious worker telling her children about sex, wireless messages came to her, she saw large white fluffy birds and airships. During the day she was fairly well oriented, but at night she was confused and misidentified those about her. When her attention could be held, her memory showed no defects. At times she realized she was ill.

Course in Hospital. Appropriate attention was given immediately to her heart condition. This included digitalis, morphine, and rest in bed with close nursing supervision. Measured fluid intake and proper elimination were instituted, and a low protein and salt-free diet prescribed. She was kept in bed for one month and then gradually allowed to be up, her heart condition meantime improving satisfactorily. During the early weeks in the hospital her visual and auditory hallucinations, with various delusional ideas, continued. These included thoughts of being hypnotized, and of being "radioed" as she called it. She believed that people looked at her in a

queer fashion, electricity was played over her body, pictures were being taken of her; she saw balloons, various colors, and queer lights. At times she was sarcastic and cross, accusing her physician of "draining" her of her energies.

Three weeks after admission, although well oriented and in contact with her surroundings, she thought that people were trying to investigate her private life. She spoke of violet rays and other rays of light being directed upon her. *Five weeks later* she was sitting quietly in her room, reading at intervals. She still believed that she was being watched, that people made derogatory remarks about her, and that she was being considered a fool. *Three months after admission* her heart was compensating well, and her delusions and hallucinations had subsided. She was now able to discuss the psychological aspects of her difficulties, including the significance of her relationship to the religious worker, and the accentuation of her sexual energies coincident with the menopause. She was frank, showed a desire to understand herself better, and had the proper attitude toward the seriousness of her mental and physical illness. She left the hospital *5 months after admission* in good physical condition and excellent spirits. She has returned to the care of her local physician who has followed her heart condition closely, at the same time appreciating some of her psychological problems.

Comment. This patient showed an interesting combination of physical and psychological factors in the etiology of her disorder. In the family background there is a tendency to heart disease, as well as frank psychotic disorders. In her personal history, on the organic side, is the classical triad for cardiac disease: frequent tonsillitis, rheumatism, and chorea. On the psychological side were her fear of growing old, the reaction to the growth of her children, and, of considerable importance, the accentuation of her sexual drive at the menopause. This latter tendency was in direct conflict with a long-established prudishness in relation to her sexual life. Her extra-marital attachment to the erratic religious worker was a partial sublimation for a deep-seated father relationship, but adult erotic phantasies entered into this; hence her sense of guilt with ideas of degradation so prominent in her mental illness.

It will be recalled that for weeks before her cardiac failure occurred the patient took long and vigorous walks daily with this man, her excessive energy

obtaining partial satisfaction in this way. This must have been a serious cardiac strain. The worry over her son's operation, and its sexual significance, may also have increased the conflicts within herself. In her mental production, when ill, the flashing lights and feelings of electricity represented dissociated energy which she projected upon her surroundings. In this regard, it is interesting to recall her criticism of her doctor for "draining" her energies. Perhaps this was her formulation to account for the great let-down in her activities, partly as a result of her heart disease, partly due to the dissipation of this energy in the projection mechanisms which created her delusional symptoms.

The clinical picture was partially an organic and partially a functional reaction. Certainly after she was oriented and clear her delusional trends and hallucinations were of serious omen, but, considering the precipitating factors and the setting of her illness, her ideas were less malignant than those ordinarily seen in frank schizophrenias. That she improved so remarkably after her heart condition improved makes it evident that some causal relationship existed between the two conditions. Before she left the hospital she had gained much understanding concerning both. She has remained well adjusted since she left the hospital about 2 years ago.

CASE No. 3. Our last patient, a married woman, aged 30, has been in the hospital 3 times with a clinical picture of dementia precox on each occasion. Her first psychotic attack followed an acute nasopharyngeal disorder; the next two exacerbations were related closely to a severe anemia.

She was last admitted in the fall of 1933. The family history was negative for mental disease but the paternal grandmother, a maternal uncle, and the mother had died of pulmonary tuberculosis. The father and two brothers are living and in good health.

Personal History. The patient was the youngest of 3 children. Birth and infancy were uneventful except that at the age of 2 she had chicken pox. Shortly thereafter the mother developed tuberculosis, and for the next 6 years the child was in close contact with her in various health resorts. She was 8 when her mother died, and during the rest of her childhood was under the care of a governess. Her father, however, really played the rôles of both parents to her.

She was petted and spoiled, or criticized and scolded, and in the end came to have a stubborn, quick, sensitive, repressed disposition. She feared her father, although she had a great deal of respect for him. Furthermore, she was rather religious in adolescence and had a strict moralistic point of view.

She completed her formal education in private schools but was never particularly brilliant. Her earlier school life was spent in open air pavilions and private camps as a precautionary measure against tuberculosis. Her menses began at 13; there has always been some pain and irregularity. In later years the flow has been prolonged and profuse. At the age of 19 she had an attack of pneumonia; a year later a second attack. Each time she was seriously ill and recuperated slowly. Each time there was a mild nervous reaction. At 21, against her father's advice, she married a young man considerably beneath her social level, lived a tempestuous life with him for a year and a half, then obtained a divorce and returned to her father. She remained at home with him until she again became infatuated with a man, this situation eventually leading to her initial psychotic attack.

First Admission. She came to the hospital for the first time in the summer of 1928, at the age of 24. For several months before admission she had been living a wild and hectic life, ending up by living in a man's apartment. This affair terminated 6 weeks before admission, when she returned to her home with an acute nose and throat infection and a high temperature. During this illness she cried hysterically, wanted to die, and was resistive to all treatment. Sedatives to induce sleep were given, but within a short time she was in terror of her father, became very excited, and had active visual and auditory hallucinations. During the height of her fever she saw snakes and toads in her bed, particularly at night. When her temperature subsided the auditory hallucinations continued. She heard people passing the house, as well as the neighbors, accusing her of being a "fast and loose woman." Later she became violent and destructive, and was then sent to a mental hospital.

Physical Status. On admission she weighed 97 pounds but lost 5 pounds more in the first week; temperature was 100.2°; pulse 100; tongue coated; gums in very bad condition; one infected molar; urine showed a trace of albumin. Hemoglobin, 88 per cent; red-blood cell, 4,380,000; white blood cell, 8,000.

Mental Status. She was restless, excited,

saw a snake and other animals in her bed at night; thought her father was there; again thought that he was dead; thought she heard her dead mother calling. Sensorium was partially clouded, although she recognized the physician as such and knew that she was in a hospital.

Course in Hospital. Two weeks after admission she was seclusive but fairly co-operative. She began to gain weight slowly but complained of tiring easily and answered questions in a whisper. Improvement in conduct continued but after three months in the hospital she admitted auditory hallucinations. Remarks of unpleasant nature were made; "they" wanted her dead; she believed a political or religious conspiracy existed to force her back to her husband; a machine installed in the wall of her room repeated her thoughts and helped these unknown conspirators to further their end. Six months after admission she was much improved with no evidence of delusions or hallucinations, although she was rather simple and childlike otherwise. She left the hospital after 9 months' residence in good mental and physical condition. She weighed 130 pounds at that time, a gain of 38 pounds since her second week in the hospital. She had menstruated irregularly but not profusely during her stay.

Second Admission. She was readmitted in the fall of 1931, 27 months after she left the hospital. In the interval she had remained chiefly at home, with few outside interests. Occasionally she would go shopping, but eventually expressed ideas that people did not like her, and she refused to go into the stores. She had some friends but showed procrastination when urged to mix with them, or to have them come to her home. She finally became interested in a friend of the family, a quiet, maternal type of man, and married him 6 months before her readmission. For an interval she appeared happy and comfortable. Two months before returning she complained of being tired and depressed, improved for a short time, then became irritable, suspicious, and very jealous of her husband. Soon she imagined that people looked at her suggestively, and believed that they passed derogatory remarks about her. She returned to the hospital after saying that she belonged in a state institution, and at the same time threatening to kill herself. Physically she again had a slight temperature, and was 25 pounds underweight. Her blood picture was interesting. Hemoglobin was 39 per cent; red blood cell, 4,500,000. The red blood cell, varied in size and shape, showing irregular staining with colorless centers. White blood cell count was normal.

She gave a history of profuse menstrual bleeding with considerable irregularity.

Her *mental condition* was about the same as it was when she was in the hospital the first time. Hallucinations were prominent, she wanted to die, thought she was insulted, and talked and chattered to herself. Occasional outbursts of excitement and impulsive behavior occurred. *A month after admission* she had gained in weight. Her hemoglobin was now 62 per cent, but there had been little change in the abnormal appearance of the red cells. In *3 months* her acute symptoms subsided, she began to improve steadily, and she left the hospital *7 months after her readmission* (2 months less than the first time). At this time her blood picture had returned to normal and she had gained 24 pounds in weight.

Third Admission. She returned once more to the hospital in November, 1933, 20 months after the preceding discharge. Since leaving the hospital the second time she had lived at home with her father and husband, but at intervals expressed much jealousy and dissatisfaction with her husband. For some months after leaving she was followed closely by her family physician, her tendency to anemia and its relation to her mental health having been brought to his attention. Eight months before she returned the third time she visited the hospital and then seemed pale and underweight. Her blood picture showed a hemoglobin of 78 per cent; red blood cell, 3,900,000; white blood cell, 6,700; color index, 1. She was a little tense and vague, expressed some mild ideas of reference, but actual hallucinations were not demonstrated. An invitation to enter the hospital again was refused, and she returned home. A report was sent to her attending physician with suggestions as to her treatment. Nothing further was heard from her until a day or so before she returned when we were informed that she had been acutely disturbed for about two weeks.

This time she was only 10 pounds underweight and had no elevation of temperature, but her pulse was around 90. The first blood picture showed 65 per cent hemoglobin; red blood cell, 3,600,000; white blood cell, 6,800; color index, .81; volume index, 1.16. The red blood cells had pale centers; there was poikilocytosis, anocytosis, and an occasional macrocytic red blood cell with basophilic cytoplasm. Her mental reactions were quite similar to the previous pictures. During the *first 2 months* in the hospital she was actively hallucinated, was noisy and resistive, and needed constant supervision because of her suicidal tendencies. Early in the *third month* she cleared

up suddenly. Approximately a week after her blood picture showed 80 per cent hemoglobin; red blood cell 5,000,000; and white blood cell, 7,200. There were no abnormal forms or staining defects. Blood picture remained normal and she left the hospital *4½ months after admission* in good mental and physical health. She had gained 13 pounds in weight.

Comment. We have then a woman of 30 who in 6 years has had 3 severe psychotic reactions. The family history showed tuberculosis in a grandmother, uncle, and the mother. Her personality, partially conditioned by her early training, was essentially narcissistic; i.e., selfish, introspective, and supersensitive. Her mother's long illness and death, when the patient was 8, brought her too close to her father. He, in turn, trying to assume both the maternal and paternal responsibilities actually limited, through his strict and over-solicitous attitude, any tendencies which she might have had to develop a sound socialized adaptation. She respected her father and feared him, but her real love was for her mother, and when the opportunity presented itself she finally broke away from her father, and for a time over-compensated in her freedom as shown by a period of questionable and erratic behavior. She drank, was promiscuous sexually, and had two induced abortions before her marriage at 21. She then married beneath her family level, separated after a year and a half of strife, had a breathing space at home for a few months, and then again broke away from her father.

Involved in another affair, she might have escaped a severe psychosis had a severe nose and throat infection not occurred. Her first attack seemed closely associated with this illness, and her next two attacks were related closely to a severe secondary anemia probably due to menorrhagia. The first part of the clinical picture in each attack was definitely colored by organic features. The visual hallucinations and apprehensiveness, noted particularly at night, together with her confusion and clouding of consciousness were typical organic symptoms.

Later, when her sensorium was clear, voices continued to accuse her of being "fast and loose." Psychologically she was now projecting her sense of guilt,

and part of this guilt undoubtedly came from her immoral and unnatural behavior which characterized her reactions after she had left her father's home. Her suicidal drive, and her belief that "they" wanted her dead, were probably expressions of her own unconscious wish for death, perhaps to be with her dead mother, whose voice she heard calling for her.

In each attack the clinical mental picture was the same, as well as the outcome, but considerable difference is noted in the duration of the separate attacks. Each succeeding attack ran a shorter course, and it is evident that her physical condition was a positive factor in this respect. In the last two attacks the return of her blood condition to normal was almost concomitant with the abrupt cessation of the hallucinations and the beginning of a rapid convalescence. It might, therefore, be said that an acute dissociation occurred within the personality of this girl as a result of an organic defect, or at least was precipitated by it. Nevertheless, the true significance of her illness cannot be understood in terms of physiological reactions alone. Psychologically we have seen how important a part the death of her mother and the relationship to her father played in influencing a personality that was not completely mature. Whether or not what might now be called a "habit" means trouble in the future, even without an organic factor, remains to be seen. Certainly keeping her in a satisfactory physical condition is of paramount importance.

Conclusions

The central aim of psychiatry, as of all medicine, is prevention. In recent years its concepts have been carried over into many fields so that one hears much of orthopsychiatry, child psychiatry, industrial psychiatry, psychoanalytical psychiatry, and numerous other aspects of its discipline. But this should not carry us away from certain fundamental principles, the most important of which is that psychiatry is a branch of medicine. The inter-relationship of somatic and psychological forces, and the importance of the integration of each in the life reaction of the individual is a common psychiatric principle. Often, of course, we can identify the well-defined organic

reaction type as an entity, likewise that true somatic group, and finally the so-called functional mental disorders. But an interplay of psychological forces, and what might be called constitutional as well as somatic factors, invariably takes place in each. Where to place the emphasis depends on the proper evaluation of the total reaction.

In the average functional case it is difficult to find a tangible somatic etiology, though many may suspect that our present methods of investigation are inadequate to disclose it. On the other hand, frequent clinical observations and studies have indicated that individual personalities have inherent qualities, more or less influenced during the period of growth, which represent potentialities for or against their ability to cope with the problems of everyday life. If what might be called a tendency to disease—organic or mental—exists in the family background, if the individual's soma has a propensity for reacting more or less severely to traumata, and finally if the personality make-up is compromised by too serious repressions or inhibitions, the individual is probably more susceptible to exogenous forces, as well as to less tangible psychological factors. We then have the groundwork for a play of pathological influences. To understand these adequately we must study the complete individual, including his physical make-up, his mental make-up, and his social adaptability.

In the cases which we have presented it seems possible that a somatic disease acted as a contributory factor, if not the important exciting cause, in the production of what may be ordinarily considered a functional mental disease. However, the successful rehabilitation of these patients required a combined attack upon the somatic and psychological features. Their future, likewise, requires similar consideration.

It must be evident, then, if such reactions exist, that the average medical practitioner, by giving careful and complete attention to the life histories of his patients, has an opportunity to contribute much to the early recognition and prevention of some of these rather common conditions. We have described well-developed and perhaps complicated cases, but

we must bear in mind that at one time these were borderline cases. An adequate understanding and application of proper

criteria of diagnoses would undoubtedly have led to successful results without complications and long hospitalization.

THE LANGUAGE OF PSYCHIATRY

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In no branch of medicine other than in psychiatry is the language which is used such an integral part. Woven into the very fabric are phrases, scientific and colloquial, that tell the history of the changing concepts dealing with diseases of the human mind. Borrowing from all cultures and all times, the nomenclature of psychiatry is a pictureque mosaic of figures of speech, coined words, popular phraseology, and other types of literary and linguistic designations.

The word *mad* is of ancient etymological vintage. Its origin is found in the Old Saxon *gemêd*, meaning foolish; the Anglo-Saxon *gemâd*, meaning *mad*; and the Gothic *gemâids*, meaning *weak* or *broken*. Mania is Greek for *madness*; the Latin is *maniacus*. Lunacy, a Latin word from *luna*, the moon, gives rise to the common terms *moon-madness*, *moon-struck*, *mooning*, and *looney*, implying mental influences by this satellite of the earth. From the Old English word *crasen*, to break, or to weaken, comes the harsh-sounding word *crazy*. *Insane* is from the Latin: *in* (*not*) and *sanus* (*mind*), hence not of sound mind.

The stem of *phrenitis*, from the Greek, refers to the *mind*, thus is derived *frenzy*. *Melancholy* translated from the Greek means *black bile*, harking back to the days of humoral pathology. *Hypochondrium*, also from the Greek, means *below the cartilage*, and the inference is that the specific localization of *hypochondriasis* is somewhere under the ribs, in the region of the spleen. *Hysteria*, Greek etymology would have it, is due to certain wanderings of the *womb*. *Psychosis*, of course, denotes that *psyche*, or soul is the source of mental aberrations.

Mania à potu suggests the dangers lurking when one is in one's cups; *delirium tremens*, its *alter ego*, stems from the Latin *delirare*, to wander, to go out of the furrow in plowing. The horrors, an older designation, is from the Latin to *bustle*, *shiver*, or *tremble with cold* or

dread. To avoid an unpleasant connotation, the phrase *delirium ebriositatis*, from the Latin *ebrius*, intoxicated, can be substituted. *Bedlam* is a vulgarism from the House of *Bethlehem*, a famous English hospital for the psychotic.

Since mental illness is a disorder in the head, it was inevitable that common usage would establish a number of colloquial symbolic references to the brain as the topmost part of the body. Something has gone wrong in this part of the anatomy, the mechanism is awry, hence the phrases: screw-loose, tile-loose, slate-loose, unhinged, off one's head, touched in the upper story, crack-brained, shattered. The resemblance of the head to a hard-shelled fruit is reflected in the stigma *nutty*. Biological references include bees in the head, bees in one's bonnet, rats in the upper story, bats in the belfry. Possessed, all possessed, and possessed with a devil recall the tenets of demonology, a sad phase in the history of psychiatry. *Cuckoo* refers to the odd habit of this well-known bird, who lays her eggs in the nests of other birds for them to hatch. *Dippy* is an extension of the first syllable of *dipsomania*, or thirst-madness, into all spheres of the psychoses. Similarly, from *hypochondriasis* comes *hipped*. *Daft*, Old English for stupid and foolish, gives play to *daffy*; from this same language comes *dizzy* (*dusi*, foolish), and *giddy* (*giddi*, mad, or silly).

The list of synonyms is hardly complete even with *non compos mentis*, mad as a March-hare, mad as a hatter, deranged, goofy, madcap, flighty, rabid, and alienism. One could comb the classic literature—such as the *Anatomy of Melancholy*—one could study fairy-tale and fable and folk-lore, and hardly exhaust the roll-call. Some are born mad, some achieve madness, some have madness thrust upon them, but all have a long-range vocabulary from which to select their favorite appellation.

43 MAIN STREET

PURULENT OTITIS MEDIA IN THE NEWBORN

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In the literature on middle ear disease one finds little mention of purulent otitis media in the newborn. Although the predisposition to the condition is eminently present, nevertheless one does not often encounter these cases either in hospital or in private practice. On the children's wards, during the period of high incidence of respiratory infections, frequently clinical evidence is found of otitis media, most likely a cross infection.

Allergy accounts for many of these cases. In the nursery for the newborn, better protection from disease is usually assured. However, one must recognize the possibilities of contact with disease during the confinement period when the mother, the obstetrician, and the nursing attendants are concerned so intimately with the dependent infant. Admitting the technical difficulties of appraising the real condition of ear disease in the newborn, one nevertheless must have temperature and weight curves as a guide to proper evaluation of present or impending trouble.

In an attempt, therefore, to see how frequently purulent otitis media occurs in the newborn, the authors made a survey of over 8,000 newborn babies, and were able to find only one case of frank purulent otitis media that was manifest clinically by drainage from the external auditory canal.

CASE 1. E.A., a colored female baby, was admitted to the nursery on January 14, 1934, as a normal newborn infant. Physical examination was entirely normal. The baby's cry was vigorous and the formula feedings were well taken. The child's course for the first week was uneventful. During this period the mother had a more stormy siege. She had been admitted to the hospital on the day of delivery with a normal antepartum history and an acute pharyngeal infection. The parturition was normal, lasting 16 hours.

In the next 5 days she developed sepsis and died on the seventh day post-partum. Blood cultures revealed no bacterial growths. Necropsy disclosed a post-partum uterus, the peritoneal surface of which was covered by a thick plastic exudate. Several

areas on section were seen to contain small abscesses.

The tubes were also covered by exudate and appeared thickened. They were adherent to the ovaries which were prolapsed in the cul-de-sac. On sectioning the uterus and tubes, free pus was encountered. Bacteriological study of this exudate showed the organism to be a nonhemolytic, short chained streptococcus.

The remaining autopsy findings were a generalized peritonitis, acute splenic tumor, cloudy swelling of the liver and kidneys, and paralytic ileus.

One day before the mother's death it was noted during routine examination that the baby had a thin seropurulent discharge from both ears. There was no temperature reaction, the infant fed well, had good stools, and showed an initial loss of weight of 4 ounces which had been regained at the time of the ear findings. The mouth and the pharynx were normal as was the remaining examination.

Cultures of the aural discharge presented a nonhemolytic, short chained streptococcus. Later cultures produced *B. coli* and staphylococci. For five weeks the child continued a steady up-grade course. The temperature never rose above 100° and the weight increased from 7.6 on January 14 to 8.12 on February 1. The ears drained throughout this period, gradually diminishing in amount until February 26 when there was practically none. Because none of the criteria for operation was present and a gradually rising weight curve was evident, surgical intervention was entirely discarded. On March 11 the temperature rose suddenly to 103°; anorexia and weight loss ensued.

The ears remained the same but the child had a slight cough. Examination disclosed scattered râles throughout both lungs. In the next 2 days the infant went steadily down-hill. Serology and other laboratory data were entirely negative. The temperature ranged between 103° and 105°, respiratory embarrassment was marked and the cough was moderately severe. The lungs revealed evidences of bronchopneumonia and the child soon died. Autopsy refused.

Comment

It is true that otitis media is almost always secondary to infection elsewhere in the body. Scherer *et al.*¹ in reviewing a

large series of nurslings found middle ear disease in 12.2 per cent of pharyngeal cases, 18.6 per cent of digestive disturbances, 6.6 per cent of pneumonias, and 22.5 per cent of congenital syphilis.

Frequently it occurs as an extension by way of the Eustachian tube, from a catarrhal process in the nasopharynx. In early life this is rendered quite easily by virtue of the shortness and relatively greater diameter of the tube. The tympanic cavity at this time also contains a considerable amount of mucus and fluid, which makes an excellent culture medium for invading bacteria. Because of these very anatomical and physiological reasons, aspiration of amniotic fluid into the middle ear, during parturition, must therefore be more common than is observed clinically. However, should the aspirated material contain an organism whose virulence varies from that of low grade to that causing severe sepsis in the child, the clinical picture would vary from a mild catarrhal to a severe purulent otitis media. The former is characterized locally by a dull gray eardrum with no visible landmarks and a low grade temperature. This stage is usually missed because otological examination is omitted and in the absence of other findings the temperature is ascribed to dehydration or inanition. These cases usually subside in a few days or occasionally a case may go on to perforation. The latter or more virulent type is more often diagnosed when the doctor's attention is drawn to a purulent discharge at the external auditory meatus, and it is this type of case that runs the gamut of events so dreaded; viz., supuration, perforation, a prolonged draining ear with the spectre of operation.

Leroux² insists that latent otitis is the rule in every neonatal infant. The ear may be infected from the very first inhalation. Bor³ has found evidences of the infection in infants who died within a few days of birth.

In one child who had died during the first stage of labor, streptococci were

found in the middle ear. The mother of that baby was infected. Renaud and Arbeltier⁴ state that since minute and repeated investigations of the ears have been instituted on their services the number of infants with otitis has jumped from 7.7 per cent to 75 per cent of the 152 infants examined. Mahn and Chomé⁵ report a case of purulent otitis media in a child infected during a prolonged delivery, probably occurring at an inspiration or a swallowing movement. They emphasize Renaud's findings and recommend the installation of a few drops of an antiseptic solution into the nose, especially when the delivery is prolonged or the mother is infected.

The occurrence of only one case of purulent otitis media in so large a series indicates quite clearly how infrequently the condition is encountered in the newborn. In the case cited, a striking feature is evident, viz., both the mother and the baby showed the same organism which was undoubtedly the exciting cause responsible for the otitis media, and aspiration of the septic material was not unlikely. The negative laboratory data rule out the question of a possible bloodstream infection as an exciting cause.

Since there is some relationship between maternal sepsis and the appearance of the disease in the newborn, the sparsity of cases may be accounted for by the fact that the maternal sepsis rate is exceedingly low in Morrisania Hospital.⁶ In the treatment of these cases it is felt that the weight curve should be the guide that determines the course to follow. No matter how profusely the ear is discharging, if the baby is gaining, one should just watchfully wait.

Conversely, if the child fails to gain, the caloric needs having been fulfilled, surgical intervention is indicated and should consist of early antrotomy. This is a simple procedure and in most cases is usually sufficient to afford adequate drainage and prompt recovery.

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References

1. Scherer and Kutvirt: *Jahrb. f. Kinderh.* 82: 249, 1915.
2. Leroux, R.: Otitis Media in Infants, *Presse Med.* 29: 999, 1921.
3. Bor, M.: Otitis Media in Infants, *Bull. Acad. de Med. Paris* 87: 399, 1922.
4. Renaud, M., and Arbeltier, R.: *Bull. Acad. de Med. Paris* 87: 394, 1922.
5. Mahn and Chomé: *Gynec. et Obst.* 6: 313, 1922 (from *J.A.M.A.* 80: 435, 1923).
6. Aranow, H.: An Account of a Year's Service in Obstetrics at the Morrisania City Hospital, *Am. Jour. Obs. & Gyn.* 25: 420, 1933.

PLEURAL ACCIDENTS IN PNEUMOTHORAX

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With the more popular use of artificial pneumothorax in the treatment of pulmonary tuberculosis, the question arises of the hazards incident to pleural puncture, what to do to avoid them and what to do when they occur.

Considerable comment has been made in the literature regarding pleural shock, air embolism, and spontaneous pneumothorax, either with the initial treatment or during subsequent refills. A brief outline of the technic employed on the tuberculosis service at the Kingston Avenue Hospital in Brooklyn will illustrate a number of points pertinent to these. The authors feel that nervousness and apprehension on the part of the patient play a large rôle in predisposition to the phenomenon known as shock. Consequently a great deal of time is taken both by the resident and the attending physician to reassure the patient and explain what it is hoped may be accomplished. One half-hour before treatment is to be initiated one-sixth grain of morphine sulphate is given by hypodermic. A spot is selected which, according to the x-ray and percussion note, is farthest away from the diseased area. It is also good practice to avoid thick muscle tissue. The skin is then painted with iodine, held taut over the intercostal space selected and infiltrated with 2 per cent novocain. Then the chest wall is slowly punctured by an 18-gauge needle with further novocain infiltration. When the parietal pleura is punctured there is a distinct give as the needle enters an area of lessened pressure. The water manometer is then turned on carefully and the pressure readings noted. It is extremely important that the pressure readings be negative and the excursions free and coincident with respiration. Air is then gradually introduced, giving 100 to 200 c.c., with pauses after the introduction of each 25 c.c. to note the pressure readings. At the appearance of any discomfort or pain the process is stopped immediately. The patient is then returned to bed and codeine grains one quarter and aspirin grains five, given as desired the first 24 hours, as during this time pain or heaviness

of the chest may be complained of. A refill is then given within 48 hours and then after 5 days. After that the length of the interval is determined by the type of collapse desired.

Pleural Shock

There has been much speculation as to the mechanism of pleural shock, but very little is actually known about it. It is felt that with careful preparation and allaying of fear and apprehension this danger is minimized considerably.

In over 2,500 pleural punctures performed at the Kingston Avenue Hospital in the past two years one case of pleural shock proved fatal as did one case of embolism.

B.M., male, of Scotch descent, was admitted to the Kingston Avenue Hospital on August 20, 1934, suffering from a far advanced bilateral exudative ulcerative pulmonary tuberculosis of both lungs. Pneumothorax was induced on the right side on September 14 and on the left side one month later. He continued to receive bilateral pneumothorax. On January 8, 1935, he was due for a refill on the left side. He had always been a very apprehensive patient. He was prepared in the usual manner, the needle introduced with an uncorrected pressure of 6 minus 4 plus 0. Air was cautiously introduced and after 50 c.c. had been given, the patient suddenly stopped breathing. The chest was fixed in forced inspiration. The pupils at first pinpoint gradually dilated and the pulse continued perceptible for some time after respiration ceased. In spite of restorative measures and artificial respiration he died. Autopsy revealed a far advanced bilateral pulmonary tuberculosis with caseation and cavitation and practically no normal lung tissue. There seemed to be no reason for the sudden death. It was felt that this man was too ill to have continued with treatment.

Embolism

T.S., male, age 45, Spanish, was admitted to the hospital April 16, 1934, with a far advanced chronic pulmonary tuberculosis, not acutely ill. Pneumothorax was advised on the right side. He was prepared in the usual manner and 400 c.c. of air was intro-

duced presumably into the pleural cavity with pressure readings zero, plus one at the beginning and zero, plus two at the end of the treatment. As the patient came to rise he collapsed and was unable to stand due to flaccidity of the lower extremities. He was put to bed. Restorative and antishock measures were used. The next day he had tonic and clonic convulsions and became maniacal requiring restraint, and died the next morning with a temperature rise to 104°.

In reviewing the case it can be seen that the operator was certainly not in the pleural cavity as evidenced by the readings recorded and that the initial dose was too great, resulting in an air embolus.

Spontaneous Pneumothorax

Spontaneous pneumothorax is a frequent concomitant of induced pneumothorax; it is a much more frequent one than one suspects. This may occur during an initial treatment when the lung may be accidentally punctured and cause no great distress to the patient. Sometimes a greater degree of pneumothorax is found present after an initial treatment than would be expected by the amount of air introduced. This can only be accounted for by a superinduced spontaneous pneumothorax. On the other hand it may cause considerable distress requiring removal of the excess air. Or it may be due to the rupture of an adhesion which may or may not be attended by great hazard. If the adhesion is small and mostly pleural, the worst that may happen is a small serous effusion that will gradually absorb. But if the adhesion breaks into infected lung tissue it may result in an empyema. This may be of mixed infection origin running a fulminant course or as more usually encountered a tuberculosis empyema.

Broken Needle

J.H., white, male, age 25, was admitted

to the hospital with a far advanced exudative lesion throughout the left lung with a cavity in the upper third. Pneumothorax was begun on the left side and continued with high pressure. The cavity did not close and he ran a persistent positive sputum. An effusion developed which rapidly became tuberculous. He was aspirated several times. During one aspiration the needle suddenly snapped and disappeared beneath the subcutaneous tissue.

The needle was 4 c.c. long, the type routinely used in aspirating pleural fluid. Immediately after the accident the incision was carried down over the point of entrance of the needle in the eighth intracostal space. After careful investigation we found that the needle had apparently penetrated into the pleural cavity. The fifth left intracostal space in the anterior axillary line was infiltrated with 1 per cent novocain and the thorascoscope (Jacobeus) inserted into the pleural cavity. The needle was easily identified protruding through the eighth intercostal space posteriorly. The original incision in the posterior chest was reopened and the needle removed.

Our purpose in reporting the above case is merely to illustrate the ease with which this foreign body was located without any great operative risk and the clearness with which the thorascoscope located it in the pleural cavity. Unfortunately so much emphasis has been put on this instrument as the means above all others for cutting pleural adhesions after pneumothorax that its rôle as an exploratory instrument for investigation of intrapleural problems has been unfortunately ignored.

The above is a summation of the serious complications encountered in 2,500 pleural punctures. The more popular this form of therapy becomes the greater will be the number of problems unless a most rigid effort is made to prevent, where possible, the above enumerated accidents.

121 FORT GREENE PLACE
80 HANSON PLACE

FACT VS. FANCY

Dr. Charles W. Mayo, son of Dr. Charles H. Mayo, founder of the Mayo Clinic, Rochester, Minn., returned from Europe on May 24 with his wife aboard the Hamburg-American liner *Albert Ballin*.

Dr. Mayo and Mrs. Mayo had visited Italy, Austria, Hungary and Germany, and

in those countries found the medical profession in pinched financial condition. Socialized medicine has greatly lowered the earning power of physicians, Dr. Mayo said, particularly in Austria and Hungary. A doctor ten years out of medical school, he said, might be earning only \$80 a year.

APPENDICITIS: A CHALLENGE

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Reports of an increasing number of deaths from appendicitis challenge the medical profession.

At the request of the New York Academy of Medicine, Dr. Shepard Krech made an intensive study of the appendicitis problem in New York City. Records of 4,542 cases of acute appendicitis were reviewed. These cases were operated in fourteen hospitals in New York city with an operative mortality of 7 per cent. This has not been decreased over a 10-year period.

The Committee on Public Health Relations of the Academy has been authorized to make a further study along the lines of the recent investigation of maternal mortality.

Every hospital and every surgeon should prepare to answer a few of the following questions:

1. What is your appendicitis mortality?
2. What percentage of cases are operated before rupture?
3. In the ruptured cases who is the cause of the delay—(a) the patient? (b) the family doctor? (c) the surgeon?
4. Are cathartics responsible for the rupture?
5. If so, by whom administered—(a) the patient? (b) the family? (c) the druggist? (d) the doctor?
6. In the complicated cases has operation been "immediate" or "deferred" and what is your mortality in these special groups of cases?

These are some of the questions which probably will be asked in public and which can only be answered by a careful analysis of the records. The hospital or surgeon whose records are incomplete will be unable to answer these important questions.

In the United States it has been estimated that between 25,000 and 30,000 persons die annually from appendicitis. If 7 per cent is the general mortality rate there must have been about 16,000 cases of acute appendicitis operated during the year in New York City. Appendicitis has therefore become a public health question of considerable importance.

This is my excuse for presenting the following analysis of 1,013 consecutive personal cases of appendicitis. These cases were operated at the White Plains Hospital up to December 1, 1934.

It may be of interest to note that this series of cases is in sharp contrast to Dr. Krech's study in the following respects:

1. The cases were operated in one hospital, by one surgeon, with a more or less uniform technic, in a community in which conditions can be controlled more easily than in New York City.

2. The White Plains Hospital serves a population group of not more than 50,000 people and a group of doctors to whom the importance of early diagnosis and early operation has been repeatedly emphasized.

There have been 13 deaths in this group of 1,013 cases or a mortality of 1.3 per cent. However, all of these deaths occurred in the group of 530 acute cases which gives a mortality of 2.4 per cent for acute appendicitis.

There was no mortality in a group of 399 uncomplicated acute cases.

There was no mortality in a group of 483 chronic and subacute cases.

The mortality problem of appendicitis is the problem of the ruptured or complicated appendix. This problem would seem to revolve about two questions:

1. *How can the number of complicated cases be reduced?* In my series of 530 acute cases 131 or 24 per cent were complicated before coming to operation. All of the mortalities occurred in this group. Can this number be reduced by earlier diagnosis and earlier operation? Constant preaching by the surgeons and intensive publicity and propaganda must be continued.

2. *How can the management of the complicated cases be improved?* Perhaps the fact that the simple, uncomplicated case may be successfully operated by surgeons of lesser experience has deprived the seriously complicated case of the services of the more experienced surgeons.

At Mt. Sinai Hospital, in New York City, on one service, the appendicitis mortality has been reduced remarkably in one year by placing the responsibility of the appendicitis problem in the hands of one man.

In a certain percentage of the cases of diffuse and generalized peritonitis, and in some of the abscess cases, especially in elderly people, something may be gained by a deferred operation. Collier has emphasized the importance of this subject. The skillful management of these late neglected cases, delaying operation until the infection is well localized and the abscess walled off, may save some of the otherwise fatal cases. Duodenal drainage through a nasal tube, intravenous saline and glucose, morphine, no fluids by mouth or rectum, no enemata or irrigations and heat applied to the abdomen are the features of the modern Ochsner treatment of peritonitis.

The necessity for this treatment, however, is caused by the fact that someone has missed the diagnosis. Either the family has failed to call the doctor in time, or the druggist has been prescribing cathartics for "stomachache," or the doctor has failed to recognize the condition in time to get the patient operated during that stage in which a successful operation can almost be guaranteed.

The Delageniere slogan of operate "*toujours et toute de suite*" is the only safe one to preach, and if it could be carried out in all cases of acute appendicitis the mortality could be practically eliminated.

These cases of appendicitis about to be reported have been divided into three groups: (1) Acute, (2) subacute, and (3) chronic.

1. *Acute Appendicitis; 530 cases; 13 deaths.* This group includes only those cases giving a history of an acute onset, associated with local physical signs, leukocytosis, and pathological findings at operation showing an acute inflammatory process.

2. *Subacute Appendicitis; 124 cases; no deaths.* This group includes those cases showing only a mild pathological process, perhaps a catarrhal inflammation of the mucosa or a mild thickening and congestion of the wall of the ap-

pendix, without the history, physical signs, and blood count to substantiate the diagnosis of acute appendicitis.

3. *Chronic Appendicitis; 359 cases; no deaths.* This group includes a great variety of pathology. The kinked and twisted appendix with partial or complete obstruction, the wholly or partially obliterated and sclerosed appendix, the appendix full of fecoliths, the greatly thickened fibrous appendix, the displaced appendix, especially the retrocecal variety.

Our interest in this presentation is directed chiefly to the question of acute appendicitis and the analysis of our 530 cases with 13 deaths, a mortality of 2.4 per cent.

In order to follow the classification used in the recent investigation by Dr. Krech in his study of this question, these acute cases have been divided into four groups.

1. *Acute Appendicitis; uncomplicated.* These are the cases in which the pathology has remained localized to the appendix, the appendix has not ruptured. The degrees of involvement of the appendix may vary all the way from an acute suppurative to a completely gangrenous process. There are 399 of these cases operated with no mortality.

2. *Acute Appendicitis with Local Peritonitis.* These are the cases in which the infection has spread beyond the confines of the appendix. There is usually discovered a small perforation through the wall of the appendix. The infection, however, has remained limited, without being walled off, to the right iliac fossa or pelvis. In this series there were 57 cases so classified with 2 deaths or a mortality of 3.5 per cent.

3. *Acute Appendicitis with Abscess.* These are cases in which the appendix has ruptured but the inflammatory process has become localized and walled off by the omentum and dense adhesions. There were 38 such cases operated, with 3 deaths—a mortality of 7.5 per cent.

4. *Acute Appendicitis with Diffuse Peritonitis.* In this group are placed all the varying grades of diffuse and spreading peritonitis not limited to the region of the appendix; 36 such cases were operated, with 8 deaths—a mortality of 22.2 per cent.

TABLE I

	Cases operated	Died	Mortality per cent
Acute uncomplicated...	399	0	0.0
With local peritonitis...	57	2	3.5
With abscess.....	38	3	7.8
With diffuse peritonitis	36	8	22.2
Total	530	13	2.4

An analysis of this study indicates that 399, or 75.3 per cent, were operated before complications ensued and while the pathology was confined to the appendix, while 131 or 24.7 per cent were complicated when they arrived for operation.

TABLE II
Time Incidence

	Per cent
Operated within 24 hrs.....	275 cases or 51.8
Operated within 24-48 hrs....	86 cases or 16.3
Total operated within 48 hrs.	361 cases or 68.2
Operated after 48 hrs.....	169 cases or 31.8

This is interesting when compared with the previous figure of 399 cases or 75.3 per cent operated before complications ensued.

TABLE III
Age Incidence

Years	Male	Female	Per cent
Under 10....	36	41	14.5
11-20	69	111	33.9
21-30	45	89	25.2
31-40	32	36	12.8
41-50	19	19	7.1
51-60	6	13	3.5
61-70	4	4	1.5
71-80	2	3	.9
81-90	0	1	.1

A study of age incidence revealed the fact that the youngest in the series was 11 months, and the oldest 82 years, and that the second and third decades provide more than half in the entire group.

TABLE IV
Age Incidence and Mortality

Years	Total	Died	Mortality per cent
Under 10	77	3	3.8
11-20	180	0	0.0
21-30	134	2	1.4
31-40	68	2	2.9
41-50	38	1	2.6
51-60	19	0	0.0
61-70	8	0	0.0
71-80	5	4	80.0
81-90	1	1	100.0

This analysis emphasizes the high mortality in the age group over 70.

TABLE V
Sex Incidence and Mortality

	Cured	Died	Mortality per cent
Males	213	206	7
Females	317	311	6
			3.2
			1.8

The higher mortality in the male group is not easily explained. This has been noted in other series of cases.

TABLE VI
Past History

	Per cent
Initial attack.....	267 cases or 50.3
Previous attack.....	241 cases or 45.4
History incomplete.....	22 cases or 4.3

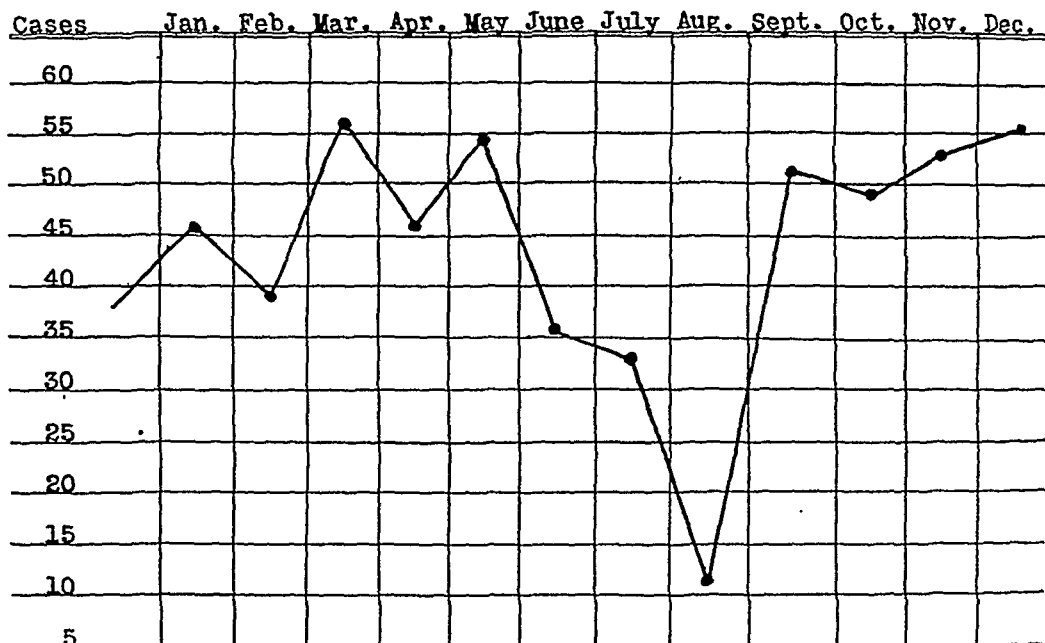
TABLE VII
Operative Procedures*

	No drain	Drained
Transverse muscle splitting incision	364	72
Right rectus incision.....	49	40
Median incision.....	3	2
	416	114

* 416 cases or 78.4 per cent were not drained; 114 cases or 21.6 per cent were drained.

This article does not intend to stress the operative procedure. The greater problem appears to be related to the question of early operation. However, there has been a general underlying principle employed in all the operations in acute appendicitis. Every effort has been made to limit the surgical procedure and manipulation to the infected area. To avoid the spread of infection special care and gentleness have been exercised in the handling of tissues. A transverse incision at the level of the anterior superior iliac spine as originally described by Delageniere of Le Mans, France, was employed in the great majority of cases. This is readily enlarged, when necessary, by what has been called a Wier's extension. The external oblique aponeurosis is retracted toward the midline, the anterior rectal sheath opened by a transverse incision, the rectus muscle retracted mesially and the transverse incision in the peritoneum enlarged mesially through the posterior rectus sheath and peritoneum.

CHART
SEASONAL INCIDENCE



In this series the maximum number of cases occurred in March and December. The sharp drop in August is explained in part by the usual vacation period. In Dr. Krech's study of 4,542 cases in New York City there was a sharp rise in the number of cases in March and September. There does seem to be a seasonal variation.

TABLE VIII
Mortality Analysis

3 children—21 mos.; 24 mos.; 6 yrs.—operated 3rd to 7th day
Late diagnosis; general peritonitis
5 adults—25–50 yrs.—operated 3rd to 7th day
3 peritonitis
1 obstruction
1 pneumonia
5 old age group—71–81 yrs.—operated 3rd to 7th day
4 ruptured, gangrenous, general peritonitis
1 ruptured, gangrenous, pneumonia

Of these 13 deaths, 11 were due to peritonitis and 1 to obstruction and 1 to pneumonia. They were all operated late, from the third to the seventh day. Delay before operation must be conceded to be the important factor in these deaths. Perhaps some of them might have been saved by the deferred operation and the Ochsner treatment. On the other hand, there might have been lost some other cases in the recovered group, had the policy of deferred operation been practiced.

I well remember several cases of greatly distended, completely gangrenous appendices, removed just before ruptur-

ing, in which cases a diagnosis of diffuse peritonitis had been made. These cases appeared very sick, with rigid, tender lower abdomens and high leukocyte counts. They all recovered promptly following operation. The difficulty of differentiating the varying degrees of pathology in a given case of acute appendicitis suggests the danger of advocating a deferred operation except in a limited and carefully selected group of cases.

During the period in which these 530 personal cases of acute appendicitis were considered, there were operated at the White Plains Hospital, by other members of the staff, 775 acute cases with 28 deaths or a mortality of 3.6 per cent. The total hospital figure up to December 1, 1934, is therefore 1,305 cases of acute appendicitis with 41 deaths or a mortality of 3.1 per cent.

Summary and Conclusions

This is a study of 1,013 consecutive personal cases of appendicitis divided into three groups: (1) 530 cases acute; (2) 124 cases subacute; (3) 359 cases chronic.

There were 13 deaths in the entire series giving a general mortality of 1.3 per cent.

The deaths all occurred among the group of 530 acute cases giving a mortality for acute appendicitis of 2.4 per cent.

The mortality problem of appendicitis is the problem of the ruptured appendix and its complications.

Earlier diagnosis and earlier operation will reduce the incidence of ruptured cases.

Great credit is due the medical men of the community, the family doctors, who first see these cases and get them to the hospital in good time for operation.

Conversely, the doctor who temporizes and delays assumes grave responsibility.

667 MADISON AVENUE

CASE REPORT:

SODIUM FORMALDEHYDE SULPHOXYLATE IN MERCURIC CHLORIDE POISONING

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S. M. Rosenthal, of the United States Public Health Service, has studied the pharmacologic action of sodium formaldehyde sulphonylate¹ and followed this with animal experimentation and clinical observation.² He found that intravenous injections of 0.5 gram sodium formaldehyde sulphonylate per kilogram to dogs which had been poisoned with mercuric chloride (20 milligram HgCl_2 per kilogram of dog) prevented death. The results of the animal experiments made by Dr. Rosenthal have been substantiated clinically.² The reported cases of acute mercurial poisoning consisted of three men and seven women. The amount of mercury ingested varied between 4 grains and 20 grains. Sulphonylate medication was instituted in from one to 7 hours after the mercury was ingested. Some of the cases had received other treatment previously or some of the drug had been lost by emesis. All the patients recovered and remarkably little kidney damage was observed.

The following case is reported because approximately 17 hours elapsed before sulphonylate treatment was instituted while in the previous reports, 7 hours was the longest time elapsed—showing the efficacy of the treatment. Also over 50 grains of mercuric chloride was taken in this case, more than twice the amount reported in any of the other cases.

Report of Case

T.S., white male of 36, was admitted to Morrisania City Hospital at 11:35 P.M. on July 24, 1934, with history of having ingested seven $7\frac{1}{2}$ grain tablets of bichloride of mercury about 90 minutes previously. He then told his father that he was going to

die. His father forced the patient to drink some milk and then summoned an ambulance. The patient vomited slightly before the ambulance arrived. The ambulance surgeon washed out the stomach with soda bicarbonate and corn starch.

On admission he complained of severe intermittent abdominal cramps. Physical examination revealed a well-developed and well-nourished white male appearing acutely ill. The tongue was hyperemic and the mucous membrane of the mouth and pharynx was congested but no ulcerations were present.

Heart and lungs were negative. There was some tenderness on pressure in the upper left epigastrium. All reflexes were normal. Bilateral lacerations of volar surfaces of both wrists. Blood pressure was 138/80. Temperature 99°, pulse 88, respiration 22.

An attempt was made to obtain sodium formaldehyde sulphonylate, but with no success, due to the late hour.

Usual routine treatment of acute mercury poisoning as described by Weiss was instituted, viz.: (1) Gastric lavage with sodium bicarbonate and then leaving 6 ounces of a saturated solution of magnesium sulphate in stomach. (2) Soapsud enema. (3) Intravenous administration of an alkali solution. Fischer's solution was used. (4) A beverage made up of one teaspoon of potassium bitartrate and one-half teaspoon of sodium citrate in a glass of orange juice was given every 3 hours.

The next morning, attempts were made to obtain sodium formaldehyde sulphonylate, but it had to be shipped in from out of town and it did not get there until 3 P.M.

Examination of blood, urine, and stools revealed mercuric chloride.

Approximately 17 hours had elapsed since the ingestion of the mercury, and the administration of the sodium formaldehyde sulfoxylate was begun. The patient received a gastric lavage of a 5 per cent solution of sodium formaldehyde sulfoxylate and then 200 c.c. of a 5 per cent solution of sodium formaldehyde sulfoxylate was left in the stomach. He also received a 10-gram dose of sodium formaldehyde sulfoxylate in a 7 per cent solution intravenously, and this was repeated in 6 hours. High colonic irrigations of sodium formaldehyde sulfoxylate in 0.1 per cent solution were given

twice daily. The colonic irrigations were given because of the long time having elapsed before the drug was obtained and in the hope that colitis would be prevented.

Before the sodium formaldehyde sulfoxylate therapy was instituted, the stomach washings, stools, urine, and blood were tested for mercury and were found strongly positive. Stool examinations also revealed presence of occult blood. After first intravenous sodium formaldehyde sulfoxylate, blood, urine, and stools were tested and showed bichloride of mercury. After the second intravenous dose of sodium formaldehyde sulfoxylate the blood was tested and showed an excess of sodium formalde-

TABLE I

Date	Urea Nitrogen	Creatinin
7-26-34.....	31 mgm.—100 c.c.	1.4 mgm.—100 c.c.
7-30-34.....	33 mgm.—100 c.c.	1.4 mgm.—100 c.c.
8-2-34.....	31 mgm.—100 c.c.	1.3 mgm.—100 c.c.
8-9-34.....	17 mgm.—100 c.c.	1.0 mgm.—100 c.c.
8-13-34.....	17 mgm.—100 c.c.	1.0 mgm.—100 c.c.
8-20-34.....	20 mgm.—100 c.c.	1.3 mgm.—100 c.c.

TABLE II

Date	7-26	7-27	7-31	8-1	8-4	8-12	8-14	8-18	8-20
Color.....	Straw	Amber	Straw	Straw	Straw	Straw	Straw	Straw	Straw
Sp. Gravity.....	1020	1024	1007	1008	1005	1010	1016	1018	1020
Reaction.....	Acid	Acid	Alk.	Alk.	Alk.	Acid	Acid	Alk.	Alk.
Albumin.....	1+	3+	1+	1+	±	0	±	±	0
Glucose.....	0	0	0	0	0	0	0	0	0
Casts.....	0	0	0	0	0	0	0	0	0
Microscopical.....	Few finely and coarsely granular casts.	Occ. coarsely and finely gran. casts. 30-40	Occ. W.B.C. R.B.C.-0 fine casts	no casts occ. W.B.C. R.B.C.-0	no casts occ. W.B.C. R.B.C.-0	0	0	0	0
	4-5 W.B.C. H.P.F.- R.B.C.-0	W.B.C. H.P.F.- R.B.C.-0							

TABLE III

Time	Specific Gravity	Quantity
8 P.M.- 8 A.M.....	1.007	50 oz.
8 A.M.-10 A.M.....	1.013	12 oz.
10 A.M.-12 A.M.....	1.013	11 oz.
12 A.M.- 2 P.M.....	1.008	10 oz.
2 P.M.- 4 P.M.....	1.010	4 oz.
4 P.M.- 6 P.M.....	1.006	8 oz.
6 P.M.- 8 P.M.....	1.014	6 oz.

TABLE IV

Date	Blood Pressure	Date	Blood Pressure
7-24.....	138/80	8-8.....	132/70
7-27.....	142/82	8-11.....	136/80
7-29.....	134/76	8-13.....	130/78
7-31.....	130/74	8-17.....	136/72
8-2.....	134/76	8-19.....	132/74
8-5.....	128/70	8-20.....	130/72

TABLE V

Date	Intake	Output
7-27.....	25 oz.	20 oz.
7-28.....	88 oz.	104 oz.
8-1.....	45 oz.	56 oz.
8-6.....	55 oz.	76 oz.
8-9.....	40 oz.	85 oz.
8-13.....	34 oz.	58 oz.
8-18.....	32 oz.	58 oz.
8-20.....	38 oz.	68 oz.

hyde sulfoxylate, thus revealing that the mercury had been combined. Three days later the urine still showed a faint trace of mercury, which disappeared in 2 more days. A recheck on urine, stool, and blood ten days later was negative for mercury.

The patient was put on a bland, non-residue diet for 2 weeks and then on a low protein diet. After the second day the patient lost his abdominal tenderness and

had no further complaints throughout his stay of 4 weeks in the hospital. At no time did he show any signs of oliguria, anuria, or colitis.

Blood chemistry reports are recorded in Table I.

White blood count on admission showed leukocytes 24,200 with polynuclears 74 per cent and lymphocytes 26 per cent.

Red blood count was 4,080,000, with 80 per cent hemoglobin.

Urine reports (casual specimens) appear in Table II.

On August 8, 1934, a Mosenthal urine concentration test was taken, results appear in Table III.

Blood pressure readings throughout the stay in the hospital are given in Table IV.

Measurements of fluid intake and output are reported in Table V.

Examination of fundi was negative throughout stay in hospital.

Patient was discharged at the end of 4 weeks and showed no effect of the bichloride of mercury, as attested by the foregoing data and his clinical appearance.

Six months later, on examination of patient's urine, it was found essentially negative and blood chemistry revealed urea N 14 mgm—100 cc, and creatinin 11 mgm—100 cc.

4761 BROADWAY

References

- 1 *Public Health Reports*, December 1933
- 2 *JAMA*, April 21, 1934 page 1277

DOCTORS FORM EQUITY ASSOCIATION

The Physicians Equity Association of America, Inc., which has been in process of organization for eighteen months, announced on May 12 the plans by which it hopes to place the medical profession on an economic status comparable with that of other professions.

The association pointed out that it had obtained the first charter granted to physicians exclusively for a Physicians' Credit Union, a cooperative bank under State supervision for the exclusive use of doctors for deposits and loans.

The association aims to eliminate free clinical service for patients who can afford to pay for private attention, to bring about reasonable compensation to the physician for every professional service rendered to support legislative bills to correct abuses in the practice and regulation of medical, surgical and other conditions affecting public health, to oppose such legislation as tends to legalize the irregular practitioner, to protect the public by removing from the profession all unqualified healers, and to create a clearer economic situation between patient and doctor.

The association's announcement says it "represents no group, clique, religion or political belief" and that the organization is devoted entirely to the economics of medicine.

Dr Robert Emmett Walsh of New York is president and the other officers are Dr Edward R. Cuniffe, first vice president, Dr Judson C. Fisher, second vice president,

Dr Seymour Fiske, secretary, Dr William M. Cooper, treasurer, and Edward J. Kelly, executive secretary.

The executive council includes among others, Dr Franklin Welker, president of the New York County Medical Society, and Dr Daniel Dougherty, secretary of the New York County Medical Society, Dr Samuel J. Kopetzky, Dr Stanley Brady, Dr William E. Butler, Dr Malcolm Campbell, Dr Joseph E. Conroy, Dr William M. Cooper, Dr John Sturge David, Dr Cassius L. De Victoria, Dr George A. Feidler, Dr Judson C. Fisher, Dr David Geiringer, Dr J. J. Eller, Dr Harold M. Hays and Dr Nathan B. Van Etten.

The organization plans to admit to membership all recognized dentists, osteopaths, and a number of other specialized groups of physicians and to organize separate committees to handle their separate problems.

"The Medical profession has divided honors with the farmers as the most socially backward of all the major occupational groups in the United States," Dr Fiske said in outlining the plans of the association. "It is the hope of the Equity's founders that their efforts in behalf of medicine will bear concrete results, not merely in bettering the conditions of private practice but also in providing the instrumentality for an adequate health service and so forestalling imposition of socialized medicine in a vicious form by an ignorant bureaucracy, with the resultant lowering of standards."

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EDITORIALS

The New Speaker of the A.M.A. House

For a long time New York has been proud of Dr. Nathan Van Etten. His wise counsel, his calm judgment, and his good humor, in addition to his studious efforts to grasp the current topic, are characteristics which have endeared him to us who have been privileged to work with him. His consistent and persistent stand against the temporary trend of the day to stampede organized medicine into socialized medicine, and his sturdy defense of the general practicing physician are well known in this, his home State. New York is happy for the distinction he has brought the Medical Society of the State, whose President he has been. In his elevation to the Speakership, we find justification and ratification of his position on pending social medical questions.

Having served the profession so well, he is worthy of the high honor which the delegates of the A.M.A. have bestowed upon him. We venture to predict that he will rule the House less through the technicalities of parliamentary law than by the magnetism of his personality.

The A.M.A. Meeting

While it is a truism that medical news usually appears promptly in the scientific and the technical press, and only later finds its way into the newspapers, and while we all know that the ideas pro-

mulgated at an annual session do not usually bring novelties to the profession, yet the scientific conventions are useful because they serve to summarize the important developments and permit an opportunity to evaluate them. The papers presented at the scientific sessions and the great scientific exhibit promoted these objectives. To listen to the comment current among the physicians in attendance, it would seem that the scientific exhibit was taking a more important place in their estimation of the scientific sessions. Here the clinician and the research worker come together in the true sense of the word, and in a totally informal way they discuss the problems interesting them, and both leave with ideas clarified and with a better comprehension of relative limitations, and an added mutual respect for each other's fields of endeavor.

The concern of the A.M.A. with the social aspects of medicine is natural. This great body of physicians attunes itself to community sentiment. It has declared itself against compulsory health insurance and against socialized medicine in general. The reasons which prompt this stand have been detailed too often to need repetition here. On the other hand, just as our State Society has done, the A.M.A. has declared its willingness to co-operate in suggesting how medical service can be provided for those who find themselves confronted with financial barriers which

prevent them from procuring adequate medical services. Today medicine is the outstanding social science. As such, the A.M.A. is taking its rightful place in guiding and directing this important service to the American people.

Progressive New York

The American Medical Association has earned the respect of sociologists and liberals of all professions by its decision to appoint a committee to study the question of birth control. New York physicians will long remember with pride that their State Society was one of those to urge this course upon the parent organization.

The A.M.A.'s decision is not to be construed as a declaration for or against birth control. Actually it is a prelude to a scientific, dispassionate study of a subject on which confusion and misinformation are rife. In spite of existing laws and the fact that many medical considerations enter into the employment of contraceptives, their present widespread use has developed under lay encouragement and direction. The entry of commercial interests into this field has further beclouded the situation with ballyhoo and misrepresentation. Social and medical progress require a clear understanding of the many factors involved; and it is precisely such an understanding that the A.M.A. hopes to provide.

The question of birth control has many ramifications. Aside from the safety and efficacy of various contraceptives and their effect on individual health, there are important biological influences to be considered and appraised. No organization is better fitted than the A.M.A. to conduct such a study. It is confidently expected that the report of the special investigating committee will make a valuable contribution to our knowledge of the medical and social aspects of birth control.

An Important Decision

A decision recently rendered by the United States Supreme Court in the case

of an Oregon dentist throws the support of the Constitution behind State laws forbidding professional advertising. In the test case, a Portland dentist questioned the authority of the State to forbid such advertising, arguing that the prohibition denies equal protection and due process of law. The Court held that the legislature of any State is within its rights in banning practices which it considers detrimental to "the vital interest of public health."

An extremely interesting and instructive feature of the decision is the distinction drawn by the Court between medical practice and "the competition of the market place." The standards of a "profession treating bodily ills" must necessarily differ from those of commerce. Beside ensuring the competence of individual practitioners, "the community is concerned in providing safeguards . . . against practices which would tend to demoralize the profession by forcing its members into an unseemly rivalry which would enlarge the opportunities of the least scrupulous." This lucid exposition of the special conditions and requirements of healing should be read by all who think they can raise the level of medical care by subordinating it to lay domination.

The Court seals a possible loophole in its decision by eliminating the truth or falsity of an advertisement as a factor in its legality. If a State forbids professional advertising, any such advertisement, whether true or false, violates the law.

This decision will infuse life blood into the many State laws which forbid dental advertising by removing the fear of nullification on Constitutional grounds. It is an incentive to medical associations to attempt to secure similar statutory safeguards for the ethics of their profession.

Puerperal Sepsis

The incidence of postpartum sepsis, with its attendant high mortality, is more frequent than one should expect in view of the safeguards which modern obstet-

rics offers a woman during childbirth. Despite all aseptic precautions to prevent the introduction of streptococci into the birth channel, the number of parturient women who succumb to puerperal bacteremia indicates that certain other factors than those already eliminated may play a rôle.

Lancefield and Hare¹ determined that postpartum uterine infections were all caused by a strain of streptococcus hemolyticus belonging to group A. However, routine cultures made from the vagina of women in labor showed the majority of the isolated hemolytic streptococci as belonging in group B or D. A smaller percentage fell into groups C, F, and G. While resembling the streptococci of group A in their biochemical reactions, the other groups differ from them immunologically in that they are harmless to man and do not produce active infection.

Since hemolytic streptococci other than those of group A may be present in the genital tract before or after delivery without producing infection, and since the group A streptococcus is rarely present in the vagina prior to labor, this strain must come from some other source. The most common abode of Group A streptococcus hemolyticus is in the nasopharynx, and it is in all probability from this source, in either the patient herself or those attending her during delivery, that the virulent strain of streptococcus is inoculated.

It is the obstetrician who must now transport this experimental work into the delivery room. Carriers of this highly pathogenic strain of streptococcus should not be brought into contact with the woman in her labor or in her puerperium; and prepartum cultures can be made to determine the presence or absence of a group A streptococcus hemolyticus. Where these streptococci are found on culture, suitable measures should be in-

stituted to free the vaginal tract of their presence before the woman comes to term.

Fever Therapy for Gonorrhea in the Female

The use of therapeutic hyperpyrexia in the treatment of certain diseases can be traced to the earliest record of its employment by the Japanese in the sixteenth century. They advocated hot volcanic water, of a temperature between 113 and 128°F., as distinctly beneficial in the treatment of syphilis and rheumatism.¹ Since then other measures have been proposed for the artificial production of fever as an advantageous form of therapy. The injection of foreign protein, the malarial treatment for neurosyphilis, the high frequency diathermy current, radiotherapy, and electrically heated cabinets have all been utilized for this purpose. The modern preference for the physical rather than the bacterial or protein method of producing fever is based upon the fact that the reactions of the latter form of therapy are not controllable to the same degree as the hyperpyrexia produced by physical means.²

Of the many ailments for which fever therapy has been tried neurosyphilis and certain types of arthritis, notably gonorrheal arthritis, seem to respond most favorably to pyrotherapy. Based upon the fact that the gonococcus can be destroyed by temperatures which are not injurious to the tissue themselves Bierman and Horowitz³ studied the effect of this form of treatment on subacute and chronic gonorrhea of the female genitourinary tract.

By the use of phototherapy combined with a diathermy electrode inserted into the vagina, the systemic temperature, per

¹ Neymann, C. A., and Osborne, S. L.: The Development of Hyperpyrexia, *Arch. Phys. Therapy* 15: 149, 1934.

² Hench, P. S., Slocumb, C. H., and Popp, W. C.: Fever Therapy, *J.A.M.A.* 104: 1779, 1935.

³ Bierman, W., and Horowitz, E. A.: Treatment of Gonorrhea in the Female, *J.A.M.A.*, 104: 1797, 1935.

¹ Lancefield, R. C., and Hare, R.: Serologic Differentiation of Pathogenic and Nonpathogenic Strains of Hemolytic Streptococci from Parturient Women, *Jour. Exper. Med.* 61: 299.

oram, could be raised to 105 or 106°F. within one and one-half hours and the intravaginal thermometer be made to register 111 to 112°F. These temperatures were maintained for a period of three to four hours. In some instances rectal diathermy was used in conjunction with the other forms of fever therapy. Bierman and Horowitz report the disappearance of gonococci in the greatest number of the cases treated by them and that repeated examinations revealed no recurrence of the organisms after three such treatments had been administered. In addition, the abnormal discharge rapidly diminished and pelvic pain, due to adnexal disease, was immensely relieved.

Attention is called to the strenuous nature of this form of therapy and the contraindications to its use are fully described. Although the number of cases thus far treated are too small to afford an exact estimation of the value of fever therapy in gonorrhea of the female genital tract, the favorable response to this form of treatment warrants its wider application in order that a more detailed knowledge of its indications and use as a specific may be obtained. From the present reports it seems as if a remedy has been found which, with proper usage, will go far toward alleviating the devastation produced by the gonococcus in the female.

CURRENT COMMENT

IN AN EDITORIAL in the *New York Times* of Sunday, June 16, 1935, there is a sympathetic comment on the recent annual meeting of the A.M.A. Among other things the *Times* says: "More and more it is evident that the complicated pills, tinctures, and concoctions of the past, all smacking a little of medieval magic, are doomed. The body is recognized as a machine, which can be repaired like any other within limits. . . .

Despite all the quackery that goes with mental healing, the day cannot be far off when souls must be treated as well as livers and hearts. No doubt, the doctors realize this themselves. Some of the effects obtained with their electrical fever machines are admittedly psychic—good modern witchcraft made to look like science by vacuum tubes and complicated circuits." One can,

in the main, agree with all this, but the day of the expert pharmacologist and drug therapist is not ended yet. He too fills a need, and in accordance with the expertness of his knowledge and its application, does he too play his part in making "needed repairs."

JUNE OF THIS YEAR marks the hundredth anniversary of the birth of Dr. Adam Politzer. The laity knows of him, and the medical profession acknowledges his outstanding pioneer work in otology. We have known and studied under him. He had great modesty, intense zeal and untiring industry; he possessed dignity and a certain quiet, unassuming elegance of manner which made a lasting impression. A small and little appreciated special branch of medicine, laying somewhat distinct from the main road, has become since his time an acknowledged, comprehensive, important branch of medicine.

DR. ALFRED P. SLOAN, JR., commenting on the Supreme Court Decision anent the NRA, said among other things: "Sooner or later, we are bound to recognize that regimentation and bureaucracy have no part in our national economy. They can only produce one result—lowered efficiency, increased costs, and reduced standard of living." And that goes double for any attempt to socialize medicine or to regiment the profession in a compulsory health insurance scheme.

THOMAS JEFFERSON said: "He who fears criticism is hopeless. Only those who do things are criticised. The idler is lost sight of in the march of events, but the doer is watched and criticized."

The Quarterly Bulletin of the Department of Health of the City of New York says that at the beginning of the present century health authorities throughout the world concentrated their attention on the control of infections. Now they are concerned with conditions which principally affect older adults. This calls for a realignment of our forces; it demands less emphasis on the infectious and diarrheal diseases, and more emphasis on the diseases of later life.

"UNTIL THE PASSAGE of the new provisions of the Compensation Law, charitable hospitals could collect the bills for all services rendered in industrial cases, including medical and surgical fees. Whether any part of the surgical charges was paid to the staff was wholly a matter between the hospital and its physicians; it was not the affair of the industrial commissioner

nor of the insurance carrier for the employer. Hereafter, *hospitals will not be permitted to receive the remuneration paid to physicians on their staffs for medical and surgical services.*" Thus says Emanuel Hayt, Esq. of the New York Bar, writing in *The New York Physician*, Vol. 4, No. 4, May, 1935.

WE THINK "The Game Guy's Prayer," which originally appeared in the *Jackson County Medical Journal*, author unknown, and which has been republished in the *St. Louis County Medical Society Bulletin*, Vol. II, No. 10, is worthy of repetition and reproduction. We give it.

Dear God: Help me to be a sport in this little game of life. I don't ask for any easy place in the line-up; play me anywhere You need me. I only ask for the stuff to give You one hundred per cent of what I've got. If all the hard drives seem to come my way, I thank You for the compliment. Help me to remember that You won't ever let anything come my

way that You and I together can't handle. And help me to take the bad breaks as part of the game. Help me to understand that the game is full of knots and knocks and trouble and make me thankful for them. Help me to get so that the harder they come the better I like it.

And, O God, help me to always play on the square. No matter what the other players do, help me to come clean. Help me to study the Book so that I'll know the rules, and to study and think a lot about the Greatest Player that ever lived, and other great players. If they found out that the best part of the game was helping other guys who were out of luck, help me to find it out, too. Help me to be a regular feller with the other players.

Finally, O God, if fate seems to uppercute me with both hands and I'm laid on the shelf in sickness or old age or something, help me to take that as part of the game, too. Help me not to whimper or squeal that the game was a frame-up or that I had a raw deal.

When, in the falling dusk I get the final bell, I ask for no lying complimentary stones. I'd only like to know that You feel that I've been a good, game guy.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

Medical Vs. Surgical Treatment of Ulcer*

36 E. 61st Street
New York City

To the Editor:

The year 1935 was ushered in by a statistical storm centering around the surgical treatment of peptic ulcer published in the January 1 issue of the JOURNAL. Many such articles as this one by Heuer echoing and re-echoing down the valley of time led Lord Moynihan, then Sir Berkeley, more than a decade ago to express himself thus in prose, poetry, and prophecy:

I believe that error has crept in upon this subject to a degree which is even now quite inadequately recognized. Much dross has been fostered upon us as pure gold, and we have meekly accepted it as such because of the high authority or the spacious phrases of the writer.

*As on the finger of a throned Queen
The basest jewel will be well esteemed,
So are those errors that in them are seen
To truths translated and for true things
deem'd.*

Moynihan, impressed by the chaos which existed in New York at that time incident to the building of subways, the destruction of old landmarks, and the construction of the modern skyscrapers, used this as a simile, stating that man with crow-bar and pick-

ax was demolishing the old worn-out buildings. So we, as physicians, must destroy and discard our previous conceptions of ulcers, to which he referred above, and build a new scientific superstructure of diagnosis and treatment on the solid-rock foundation of surgery and roentgenology.

Statistics and generalities are both bad actors when they play alone, and are even worse when they play together. The jokes made of and the debris thrown at these actors are so old that they both are odiferous, but the play goes on even though the vast majority of the audience and even the actors themselves do not know whether the theme is gastric or duodenal. Mortality statistics as low as zero for gastric resections are included in Heuer's compilation, and yet facts which prove an exceedingly high mortality for gastric resections, as recorded in *The American Journal of Surgery* of October, 1929, were not included. One wonders why. Was it because of the source of these statistics, because

* This communication is a response to Dr. George J. Heuer's article, "The Choice of Operations in the Treatment of Peptic Ulcer," which appeared in the January 1, 1935, issue of the JOURNAL.

they were not arranged in tabulated statistical form, or because they are so much higher than the average? Certainly not the latter reason, as they would only offset the zero, which was included.

The great danger incident to the presentation of such a statistical paper is that the average general surgeon, who seldom has an opportunity to do a gastric resection for ulcer, seeing the relatively low mortality quoted—particularly the low mortality of the European operators and Judd's phenomenally low mortality of 0.4 per cent—quotes these to a prospective surgical patient, leading the patient to believe that these are *his own* mortality rates rather than those of the very best American and European surgeons. The surgeon, therefore, really acquires the consent of the patient to operation under false pretenses.

SURGICAL TREATMENT OF "DUODENAL" ULCER

Gastric and "duodenal" ulcers differ so radically from various standpoints—such as, etiology, pathogenesis, processes of repair, and particularly indications for surgical or medical treatment and the mortality and morbidity of each of these—that findings observed or conclusions drawn from gastric ulcers should not be applied to "duodenal" ulcers, and vice versa. One should be grateful to Heuer that early in his article he recognizes these differences, at least in principle. However, one immediately regrets that in practice he falls from grace, because in far less than half of the cases reported (only 5,839 out of 12,572) does he even know whether the ulcer was gastric or "duodenal." His echo of Judd's 1,360 cases of pyloroplasty with only a 0.4 per cent mortality and 90 per cent satisfactory results would indicate that surgery is on the verge of the Millennium, at least so far as "duodenal" ulcer is concerned. Yet in the same institution at the same time, Balfour was doing 500 gastro enterostomies for the same disease with four and one half times the mortality and results not so satisfactory.

Heuer further points out that the average mortality for mortal man (or surgeon) for gastro enterostomies is 68 per cent, or approximately four times as great as Balfour's for gastro enterostomies and 17 times as great as Judd's for pyloroplasties with even more satisfactory results. It seems strange that another member of the group, who is thoroughly familiar with the success and failure of these two methods of treatment, should not avail himself of one or the other of these remarkable cures with such phenomenally low mortality rates for

cure of his own ulcer. Surgeons who have had the greatest experience with operations for "duodenal" ulcers avoid operations in their own cases. Moynihan in 1928 told me personally and has expressed it publicly that he was spending more time taking down unnecessary gastro enterostomies than he was in doing them. Surgeons throughout the world after using one or both of these methods extensively over many years have found them so unsatisfactory as to mortality and morbidity that the tide has turned toward pylorectomies, gastrectomies, and gastric resections (Devine), even though, according to Heuer's statistical report, they carry a mortality rate of from 0 to 25 per cent, with an average of 12 per cent, and less satisfactory results (only 80-85 per cent—as compared with the 90 per cent satisfactory results with 0.4 per cent mortality) reported by Judd for pyloroplasty. Something is wrong, either with the statistics or with the mentality of the surgeon who is not satisfied with a 90 per cent cure over a 0.4 per cent mortality for himself as well as for his patients.

SURGICAL TREATMENT OF GASTRIC ULCER

Heuer states that the surgical mortality for gastric ulcer is much higher than for "duodenal" ulcer, and the late results not nearly so satisfactory, and in proof of this he again echoes statistics of the past. Yet he urges surgical treatment for gastric ulcers because of their *supposed potential malignancy*, but his operation of choice is only a *local V-excision*, or perhaps not even any removal of the supposedly malignant ulcer, as advised under paragraphs C and D on page 6 of his article. Certainly such a local excision is not consistent with the surgical treatment of cancer in other parts of the body. Few surgeons would remove one quadrant of the gut with a local V-excision for a small ulcerating carcinoma of the colon.

MALIGNANCY OF GASTRIC ULCERS

Both pathological and roentgenological findings indicate that gastric cancer is a cancer from the start, that gastric ulcer is an ulcer from the start, that gastric cancer frequently ulcerates, but that gastric ulcer seldom, if ever, cancerates. We know that gastric cancers ulcerate. We know that in gross pathological appearance ulcerating carcinomas somewhat resemble simple benign ulcers. We know that carcinomatous cells occur in the bed or lip of an ulcerating area. *But I have yet to see a single microscopical section in which carcinomatous cells occur in an ulcerating area where the other microscopical criteria are those of*

simple benign ulcer. (By carcinomatous cells I mean criteria of carcinoma acceptable to the majority of eminent pathologists.) This challenge may bring forth one or more such sections. I hope it does. In spite of the high mortality and less satisfactory results for the surgical treatment of gastric ulcer as quoted by Heuer, the patient is still pried on to the operating table by this malignancy argument when all others fail; in fact this argument is so satisfactory that it is continually being brought to the fore.

In the last decade the statistics concerning the frequency of carcinoma being engrafted on a simple benign gastric ulcer has been forced down from 68 per cent (MacCarty of Mayos') to 5 to 10 per cent (Newcomb of England), and most of the pathologists at the present time believe that the percentage is very much lower than this. The controversy concerning the use of 68 per cent gastric ulcer malignancy, on which the Mayos claimed 38 per cent three-year cures and 25 per cent five-year cures, was the subject of an article presented by the writer before the Gastro-Enterological Section of the American Medical Association in 1920. This article was refused publication in the *J.A.M.A.* The article was finally published nine years later in the *Journal of Radiology* (January, 1929).

Concerning the malignancy of gastric ulcer as an indication for surgery, Heuer in a single paragraph expresses himself thus:

The number of gastric ulcers which may become carcinomatous is in the opinion of surgeons large enough to warrant the removing of all gastric ulcers, if removal is not attended by too great risk; it is not large enough in my opinion to warrant the removal of an ulcer if the removal seriously jeopardizes the patient's life.

This paragraph is the crux of his whole article. In the first half of the paragraph he shifts the responsibility of using the argument of malignancy to get the patient to consent to the operation to other unnamed surgeons; in the second half he gets "out from under" without *boldly saying that he does not believe that this argument should be used* because the danger of surgical death is greater than the danger of death from malignancy, although his statistics, previously quoted, definitely indicate this fact. According to his own statistics the mortality incident to *any* operation which would remove the ulcer and its surrounding area of induration was from 5 to 30 per cent for gastric resections and 8.8 per cent for local excision of pyloric lesions. Either of these percentages is greater than the 5 to 10 per cent, perhaps with an average of 7 per cent, which is the

highest pathological figure of malignancy engrafted upon an ulcer that is apparently now available.

ROENTGENOLOGICAL DIFFERENTIAL DIAGNOSIS

The majority of ulcerating gastric cancers can be differentiated from simple benign ulcers by a single roentgenological examination composed of a sufficient number of films made in various postures at various intervals during digestion, and practically all ulcerating carcinomas should be differentiated from simple ulcers by two or three roentgen examinations made at relatively short intervals. This differentiation is easy in the vast majority of cases and difficult in a few. I have made errors in the past and probably will in the future, but they should become less and less frequent as time goes on.

ROENTGENOLOGICAL INDICATIONS FOR MEDICAL TREATMENT

The best roentgenological criteria for the medical treatment of simple benign gastric ulcer that I know and the only one which up to the present time has proved infallible is the following: The patient with a gastric ulcer should be put to bed on absolute rest—without even bathroom privileges—given a bland diet of sufficient calories to maintain good nourishment, and have a weekly x-ray examination of a series of at least four films in the position which showed the ulcer most distinctly at the time it was first diagnosed roentgenologically. If, at the end of 17 days, the crater is diminished to at least one-half its cubic capacity *without an increase in the area of induration* surrounding the crater, the ulcer is a simple benign one and the patient should be treated medically with continued rest in bed. Careful observation concerning whether there is an increase in the area of induration surrounding the crater is, I believe, of paramount importance.

ROENTGENOLOGICAL INDICATIONS FOR SURGICAL TREATMENT

If at the end of three weeks the crater has not diminished in its cubic capacity, and particularly if the area of induration remains the same or has increased in size, the lesion should be considered as not a *simple garden variety* of ulcer, probably not a simple benign ulcer, and therefore surgical procedure is indicated; but, in my opinion, such surgical procedure as will completely remove not only the crater but the entire surrounding area of induration, and preferably as much of the adjacent normal gastric wall as the skill of the operator permits.

ABILITY OF THE SURGEON TO PERFORM GASTRECTOMIES

A surgeon whose skill does not permit him to do a sufficiently extensive gastrectomy, even up to a subtotal, for the removal of such a lesion on the lesser curvature at, or proximal to, the sulcus angularis with less than a 50 per cent mortality, should, in my opinion, refer the case to one whose skill is sufficient. By adhering strictly to this procedure practically all simple benign ulcers will escape surgery and the unusual or what we have come to term "hothouse variety" of gastric ulcers, be they malignant or otherwise, will have the benefit of surgery and we hope by one of the more competent abdominal surgeons.

STATISTICAL PAPERS SHOULD BE BASED ON PERSONAL EXPERIENCE

Such an analytical statistical paper as the one under discussion could have been prepared by any surgeon with an analytical mind, who was forced to prepare a paper on this subject without having sufficient personal experience in operative procedure on gastric ulcer to have quoted his own material. The vast opportunity for personal operative work that has been available to Dr Heuer in the various large institutions with which he has been associated leads one to wish that soon he will present his own personal material, or by preference all gastric ulcer cases or all "duodenal" ulcer cases (in different papers) that have been operated by his staff, for whose success he reaps professional reward and for whose failures he must assume the responsibility. The value of such a presentation would be markedly augmented by a tabulated chart (not statistical) giving the initial or number of the patient, the type of operation, the date of operation, the initial of the operator, a cross or star as to whether the patient died from surgical death, a figure (1,2,3,4 etc.) indicating the number of years over which an actual clinical and roentgenological follow-up were possible, and a word as to the remaining symptoms if any.

By so doing Dr Heuer would aid in the fulfillment of Moynihan's wish or prophecy by wiping clean the slate of all the bunk that has been said and written concerning the surgical treatment of peptic ulcer, and record only his actual facts regarding surgical technique, mortality, and morbidity, proven by gross and microscopical pathological material sections of which should be retained for a more intensive study in the cases where the subsequent course of the disease is not what he or others might expect.

LEWIS GREGORY COLF, M.D.

May 6, 1935

A Racket Worked on Doctors

Dundee, New York

To the Editor

There is a racket being worked on doctors in this section. How extensive this is I do not know, but I and at least one doctor in a neighboring village have been taken in by it.

The setting is usually a person on a work train (fictitious) taken with an attack of gravel and who needs some morphine to ease the pain till he can be taken into a hospital. A telephone call advises of the above and states that someone will call for the morphine. Shortly a man comes into the office and tells how the "Boss" is subject to these attacks. He has a check all ready on a bunk that I find out later does not exist. The street address of the drawer of the check (also fictitious) will also be on the check. Would the doctor be kind enough to take out his fee and give the balance in cash as they want to get a hot water bottle and some other supplies at the drug store?

The above may be varied in that the man may be on a freight truck, having been taken with pain on the road.

I thought it advisable to write you the above so that other doctors may be on the look out for this scheme.

A. F. WRIGHT

FATAL DRUG STORE BARGAINS

The danger lurking in the wild cat drug store is vividly brought home by two fatal cases in California, told in a Santa Monica paper and quoted in the state medical journal. "A tragic result of bargain buying in local cut-rate drug stores was evidenced recently when the Santa Monica Hospital reported the death of two emergency cases

resulting from poorly prepared prescriptions, filled by this chain outfit. At a physicians' meeting this week, prominent medicos of the Bay District expressed a warning to all residents who might need the aid of a pharmacist to the effect that prescriptions should be filled at a reputable, ethical pharmacy."

Society Activities

Workmen's Compensation Committee

Chapter 258 of the Laws of 1935 which appeared in the May 1, 1935, issue of the JOURNAL, page 510, was later amended by the Legislature. These further amendments (Assembly bill 2984, Connery) have been incorporated into the first text and are those portions set in boldface.

CHAS. GORDON HEYD, *Chairman*
FREDERIC E. ELLIOTT
DAVID J. KALISKI

MEDICAL ABUSES LAW—AS AMENDED

Laws of New York—By Authority

An Act to amend the workmen's compensation law and the labor law, in relation to treatment and care of injured employees, providing for the selection by the injured employees of physicians authorized by the industrial commissioner to render medical treatment and care, empowering the industrial commissioner to establish a schedule of minimum charges and fees, enlarging the membership of the industrial council, and making an appropriation.

Became a law March 28, 1935, with the approval of the Governor. Passed, three-fifths being present.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

Section 1. Section thirteen of chapter eighteen hundred and sixteen of the laws of nineteen hundred thirteen, entitled "An act in relation to assuring compensation for injuries or death of certain employees in the course of their employment and repealing certain sections of the labor law, and relating thereto, constituting chapter sixty-seven of the consolidated laws," as amended and re-enacted by chapter forty-one of the laws of nineteen hundred fourteen and as last amended by chapter five hundred and fifty-three of the laws of nineteen hundred twenty-seven, is hereby amended to read as follows:

§ 13. *Treatment and care of injured employees.* (a) The employer shall promptly provide for an injured employee such medical, surgical or other attendance or treatment, nurse and hospital service, medicine, crutches and apparatus for such period as the nature of the injury or the process of recovery may require. The employer shall be liable for the payment of the expenses of medical, surgical or other

attendance or treatment, nurse and hospital service, medicine, crutches, and apparatus necessitated by the injury of an employee, for such period as the nature of the injury or the process of recovery may require. All fees and other charges for such treatment and services shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living.

The commissioner shall prepare and establish a schedule for the state, or schedules limited to defined localities, of minimum charges and fees for such medical treatment and care, to be determined in accordance with and to be subject to change pursuant to rules promulgated by the commissioner. Before preparing such schedule for the state or schedules for limited localities the commissioner shall request the president of the medical society of the state of New York to submit to him a report on the amount of remuneration deemed by such society to be fair and adequate for the types of medical care to be rendered under this chapter, but consideration shall be given to the view of other interested parties. The amounts payable by the employer for such treatment and services shall in no case be less than the fees and charges established by such schedule. Nothing in this schedule, however, shall prevent voluntary payment of amounts higher than the fees and charges fixed therein, but no physician rendering medical treatment or care may receive payment in any higher amount unless such increased amount has been authorized by the employer, or by decision as provided in section thirteen-g herein.

Nothing in this section shall be construed as preventing the employment of a duly authorized physician on a salary basis by an authorized compensation medical bureau or laboratory.

(b) In the case of persons, injured outside of this state, but entitled to compensation or benefits under this chapter, the provisions as to selection of authorized physicians shall be inapplicable. In such cases the employer shall promptly provide all necessary medical treatment and care but if the employer fail to provide the same, after request by the injured employee such injured employee may do so at the expense of the employer. The employee shall not be entitled

to recover any amount expended by him for such treatment or services unless he shall have requested the employer to furnish the same and the employer shall have refused or neglected to do so, or unless the nature of the injury required such treatment and services and the employer or his superintendent or foreman having knowledge of such injury shall have neglected to provide the same; nor shall any claim for medical or surgical treatment be valid and enforceable, as against such employer, unless within twenty days following the first treatment, the physician giving such treatment, furnish to the employer and the industrial commissioner a report of such injury and treatment, on a form prescribed by the industrial commissioner. The board may, however, by the unanimous vote of all the qualified members, excuse the failure to give such notice within twenty days when it finds it to be in the interest of justice to do so, and may, subject to the limitations contained in section twenty-eight of this chapter, make an award for the reasonable value of such medical or surgical treatment. All fees and other charges for such treatment and services, whether furnished by the employer or otherwise, shall be subject to regulation by the board as provided in section twenty-four of this chapter, and shall be limited to such charges as prevail in the same community for similar treatment of injured persons of a like standard of living.

(c) The liability of an employer for medical treatment as herein provided shall not be affected by the fact that his employee was injured through the fault or negligence of a third party, not in the same employ, unless and until notice of election to sue or the bringing of suit against such third party. The employer shall, however, have an additional cause of action against such third party to recover any amounts paid by him for such medical treatment, in like manner as provided in section twenty-nine of this chapter.

(d) The industrial board, on its own motion, or a referee, upon the recommendation of the chief medical examiner for the workmen's compensation division, hearing a claim for compensation may require examination of any claimant by a physician especially qualified with respect to the diagnosis or treatment of the disability for which compensation is claimed; and may require a report from such physician on the diagnosis, the causal relationship between the alleged injury and subsequent disability, proper treatment, and the extent of the disability of such claimant. The physician to conduct such examination shall

be designated by the commissioner from a panel of especially qualified physicians submitted to him by the medical society of the county, or any other board acting for any school of medical practice. Additional names for such panel shall be furnished by the society whenever requested by the commissioner and if such request is not complied with in thirty days the industrial commissioner may add thereto names of his own selection. The employer or his insurance carrier shall pay for such examination in an amount to be directed by the industrial commissioner.

§ 2. Such chapter is amended by inserting therein ten new sections, to be sections thirteen-a to thirteen-j inclusive, to read, respectively, as follows:

§ 13-a. *Selection of authorized physician by employee.* (1) An injured employee may, when care is required, select to treat him any physician authorized by the commissioner to render medical care, as hereafter provided. If for any reason during the period when medical treatment and care is required, the employee wishes to transfer his treatment and care to another authorized physician, he may do so, in accordance with rules prescribed by the commissioner. In such instance the remuneration of the physician whose services are being dispensed with shall be limited to the value of treatment rendered at minimum fees as established in the schedule for his location, unless payment in higher amounts has been approved as authorized in section thirteen, paragraph a. If the employee is unable due to the nature of the injury to select such authorized physician and the emergency nature of the injury requires immediate medical treatment and care, or if he does not desire to select a physician, and in writing so advises the employer, the employer shall promptly provide him with the necessary medical care, provided however, that nothing herein contained shall operate to prevent such employee, when subsequently able to do so, from selecting for continuance of any medical treatment or care required, any physician authorized by the commissioner to render medical care as hereinafter provided.

(2) The commissioner shall prescribe the form of a notice informing employees of their privilege under this chapter, and such notice shall be posted and maintained by the employer in a conspicuous place or places in and about his place or places of business.

(3) The employer shall have the right to transfer the care of an injured employee from the attending physician, whether chosen originally by the employee or by

the employer, to another authorized physician (1) if the interest of the injured employee necessitates the transfer or (2) if the physician has not been authorized to treat injured employees under this act or (3) if he has not been authorized under this act to treat the particular injury or condition as provided by section thirteen-b (2). An authorized physician from whom the case has been transferred shall have the right of appeal to an arbitration committee as provided in subdivision two of section thirteen-g and if said arbitration committee finds that the transfer was not authorized by this section, said employer shall pay to the physician a sum equal to the total fee earned by the physician to whom the care of the injured employee has been transferred, or such proportion of said fee as the arbitration committee shall deem adequate.

(4) No claim for medical or surgical treatment shall be valid and enforceable, as against such employer, or employee, unless within forty-eight hours following the first treatment the physician giving such treatment furnish to the employer and the industrial commissioner a preliminary notice of such injury and treatment, and within twenty days thereafter a more complete report on a form prescribed by the industrial commissioner. The industrial board may excuse the failure to give such notices within the designated periods when it finds it to be in the interest of justice to do so. Upon receipt of the notice herein provided the employer shall be entitled to have the claimant examined by a qualified physician at a place reasonably convenient to the claimant and in the presence of the claimant's physician, and refusal by the claimant to submit to such examination at such time or times as may reasonably be necessary in the opinion of the industrial board, shall bar the claimant from recovering compensation for any period during which he has refused to submit to such examination.

(5) No claim for specialist consultations, surgical operations, or physiotherapeutic procedures costing more than twenty-five dollars shall be valid and enforceable, as against such employer, unless such special services shall have been authorized by the employer or by the commissioner, or unless such authorization shall have been unreasonably withheld, or unless such special services are required in an emergency. No claim for X-ray examinations or special diagnostic laboratory tests costing more than ten dollars shall be valid and enforceable, as against such employer, unless such special services shall have been authorized

by the employer or by the commissioner, or unless such authorization shall have been unreasonably withheld, or unless such special services are required in an emergency.

§ 13-b. *Authorization of physicians by commissioner.* 1. The commissioner shall upon the recommendation of the medical society of each county or of a board designated by such county society, or by a board representing duly licensed physicians of any other school of medical practice, authorize physicians licensed to practice medicine in the state of New York to render medical care under this chapter. If, within sixty days after the commissioner requests such recommendations, the medical society of any county or board fails to act, or if there is no such society in a county, the commissioner shall designate a board of three qualified physicians, who shall make the requested recommendations. No such authorization shall be made in the absence of recommendation of the appropriate society or board or of review and recommendation of the industrial council as provided in clause (g) of subdivision four of section ten-a of the labor law. No person shall render medical care under this chapter without such authorization of the commissioner, provided, that: (a) emergency (first aid) medical care may be rendered under this chapter by any physician licensed to practice medicine in the state of New York without authorization by the commissioner under this section; and

(b) a licensed physician who is a member of a constituted medical staff of any hospital may render medical care under this chapter while an injured employee remains a patient in such hospital; and

(c) under the active and personal supervision of an authorized physician medical care may be rendered by a registered nurse, registered physiotherapist or other person trained in laboratory or diagnostic technics within the scope of such persons' specialized training and qualifications. This supervision shall be evidenced by signed records of instructions for treatment and signed records of the patient's condition and progress. Reports of such treatment and supervision shall be made by such physician to the commissioner on such forms and at such times as the commissioner may require.

2. A physician licensed to practice medicine in the state of New York who is desirous of being authorized to render medical care under this chapter, shall file with the medical society in the county in which his office is located, or with a board designated by such society, or by a board designated by the commissioner as provided in section

thirteen-b, an application for authorization under this chapter. In such application he shall state his training and qualifications and shall agree to limit his professional activities under this chapter to such medical care as his experience and training qualify him to render. He shall further agree to refrain from subsequently treating for remuneration, as a private patient, any person seeking medical treatment in connection with, or as a result of, any injury compensable under this chapter, if he has been removed from the list of physicians authorized to render medical care under this chapter, or if the person seeking such treatment has been transferred from his care in accordance with the provisions of this chapter. This agreement shall run to the benefit of the injured person so treated and shall be available to him as a defense in any action by such physician for payment for treatment rendered by a physician after he has been removed from the list of physicians authorized to render medical care under this chapter, or after the injured person was transferred from his care in accordance with the provisions of this chapter. The medical society or a board designated by it, or by a board as otherwise provided in section thirteen-b, if it deem such licensed physician duly qualified, shall recommend to the commissioner that such physician be authorized to render medical care under this chapter, and such recommendation and authorization shall specify the character of the medical care which such physician is qualified and authorized to render under this chapter. A licensed physician may present to the medical society or board evidences of additional qualifications at any time subsequent to his original application. If the medical society or board fails to recommend to the commissioner that a physician be authorized to render medical care under this chapter, the physician may appeal to the industrial council as provided in clause (g) of subdivision four of section ten-a of the labor law.

3. Laboratories and bureaus engaged in X-ray diagnosis or treatment or in physiotherapy or other therapeutic procedures and which participate in the diagnosis or treatment of injured workmen under this chapter shall be operated or supervised by qualified physicians duly authorized under this chapter and shall be subject to the provisions of section thirteen-c of this chapter. The person in charge of diagnostic clinical laboratories duly authorized under this chapter shall possess the qualifications established by the public health council for approval by the state commissioner of health or, in the city of New York, the

qualifications approved by the board of health of said city and shall maintain the standards of work required for such approval.

§ 13-c. *Licensing of compensation medical bureaus and laboratories.* (1) The commissioner may, upon the recommendation of the medical society of each county or of a board designated by such county society, or of a board as provided in section thirteen-b, authorize and license compensation medical bureaus, operated by qualified physicians wholly or principally for the diagnosis and treatment of industrial injuries or illnesses in respect of which they are authorized to render medical care under this chapter.

The commissioner may, upon the recommendation of the medical society of each county or of a board as provided in section thirteen-b, authorize and license separate laboratories and bureaus engaged in X-ray diagnosis or treatment, in clinical diagnosis, or in physiotherapy or other therapeutic procedures, which participate in the diagnosis or treatment of injured workmen under this chapter. Application for such authorization shall be made on forms to be furnished by the commissioner and shall disclose in full the nature of the personnel and equipment of such bureaus. No such authorization shall be made in the absence of recommendation from the appropriate society or board. Each such bureau or laboratory which receives such authorization shall:

(a) Make reports on its personnel and equipment in such form and at such times as may be required by the commissioner; and

(b) be subject to inspection by the commissioner or the medical society of the county in which such bureau or laboratory is located; and

(c) pay to the commissioner a license fee of fifty dollars per annum for each office of such bureau or ten dollars per annum for a separate laboratory.

§ 13-d. *Removal of physicians from lists of those authorized to render medical care.*

1. The medical society or board that has recommended the authorization of physicians to render medical care under this chapter shall investigate, hear and determine all charges of professional or other misconduct by any authorized physician, or by any compensation medical bureau licensed as herein provided, under rules and procedure to be prescribed by the industrial council of the department of labor and shall report evidence of such misconduct, with their determination thereon, to the commissioner. Such investigation, hearing,

report and determination may be made by the board of an adjoining county upon the request of the medical society of the county in which the alleged misconduct or infraction of this chapter occurred. The industrial council of the department may review the determination of such medical society or board, and on application of the physician accused must do so, and may reopen the matter and receive further evidence. The decision and recommendation of such industrial council shall be final, binding and conclusive upon the industrial commissioner.

2. The commissioner shall remove from the list of physicians authorized to render medical care under this chapter the name of any physician who he shall find after reasonable investigation is disqualified because such physician (a) has been guilty of professional or other misconduct or incompetency in connection with medical services rendered under this chapter; or

(b) has exceeded the limits of his professional competence in rendering medical care under this chapter or has made materially false statements concerning his qualifications in his application for the recommendation of the medical society in the county in which his office is located, or of the board designated by it, or of a board as provided in section thirteen-b; or

(c) has failed to submit full and truthful medical reports required to be made by him to the commissioner, or the industrial board; or

(d) has rendered medical service under this chapter for a fee less than fixed by the commissioner as the minimum rate in his locality; or

(e) has participated in the division, transference, assignment, rebating, splitting or refunding of a fee for medical care under this chapter; or

(f) has solicited, or has employed another to solicit for himself or for another the professional treatment, examination or care of an injured employee in connection with any claim under this chapter.

Nothing in this section shall be construed as limiting in any respect the power or duty of the commissioner to investigate instances of misconduct, either before or after investigation by a medical society or board as herein provided, or to temporarily suspend the authorization of any physician that he may believe to be guilty of such misconduct.

§ 13-e. *Revocation of licenses to compensation medical bureaus.* The commissioner shall revoke the license of any compensation medical bureau upon a finding certified to him by the medical society, or board designed by such county medical society, or by a board as provided in section thirteen-b,

that has recommended the licensing of such compensation medical bureau, or by the industrial council, that such bureau has been guilty of professional or other misconduct, or of violation of the provisions of this chapter, or that the personnel of such bureau is not properly qualified under this chapter or that the equipment of such bureau is inadequate for the proper rendering of medical care.

A medical society or board may upon direction of the commissioner or upon its own motion investigate the alleged disqualification, as defined in this section, of any physician whose authorization to render medical care under this chapter it had previously recommended, or the alleged grounds for revocation of the license of any compensation medical bureau whose licensing it had previously recommended. Such physician or bureau shall be notified of the charges against him or it and shall be given reasonable opportunity to be heard and to present evidence in his or its behalf. Upon the completion of its investigation such society or board shall communicate its findings to the commissioner and to the physician or bureau whose conduct was investigated, and shall file with the commissioner a record of the evidence upon which such findings were based.

Nothing in this section shall be construed as limiting in any respect the power or duty of the commissioner to investigate instances of misconduct, either before or after investigation by a medical society or board as herein provided, or to temporarily suspend the license of any compensation medical bureau that he may believe to be guilty of such misconduct.

§ 13-f. *Payment of medical fees.* (1) Fees for medical services shall be payable only to a physician or other lawfully qualified person permitted by section thirteen-b of this chapter to render medical care under this chapter, or to the agent or to the executor or administrator of the estate of such physician. No physician rendering treatment to a compensation claimant, shall collect or receive a fee from such claimant within this state, but shall have recourse for payment of services rendered only to the employer under the provisions of this chapter. Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services.

(2) Whenever his attendance at a hearing is required, the physician of the injured employee shall be entitled to receive a fee from the employer, or carrier, in an amount to be fixed by the commissioner in addition

to any fee payable under section one hundred twenty.

§ 13-g. *Payment of bills for medical care.* (1) Unless within thirty days after a bill has been rendered to the employer by the physician or hospital which has treated an injured employee, such employer shall have notified the commissioner and such physician or hospital in writing that such employer demands an impartial examination of the fairness of the amount claimed by such physician or hospital for his or its services, the right to such an impartial examination shall be deemed to be waived and the amount claimed by such physician or hospital shall be deemed to be the fair value of the services rendered by him or it.

(2) If the parties fail to agree as to the value of medical aid rendered under this chapter such value shall be decided by an arbitration committee consisting of two physicians designated by the president of the medical society of the county in which the claimant resides, and two physicians, also members of the medical society of the state of New York, appointed by the employer or carrier. The majority decision of the arbitration committee shall be conclusive upon the parties as to the value of the services rendered. In the event of equal division, the committee shall select a fifth physician, also a member of the medical society of the state of New York, whose decision shall be conclusive. If the physician whose charges are being arbitrated is a member in good standing of the New York Osteopathic Society or the New York Homeopathic Society, the members of such arbitration committee to be appointed, similarly, shall be physicians of such organization and the president of such organization shall make the designation provided herein.

(3) The parties to arbitration proceedings under this section shall each pay to the industrial commissioner a sum equal to five per centum of the amount payable under such decision, or a minimum of two dollars, whichever is greater. From sums so collected the commissioner shall pay to each member of the arbitration committee, a per diem fee of ten dollars for each arbitration session attended.

§ 13-h. *Medical treatment by public hospitals.* Hospitals maintained wholly by public taxation may treat only emergency cases under this chapter, and may treat such emergency cases only so long as the emergency exists. This section shall not be applicable, where there is not available a hospital other than a hospital maintained by taxation, nor shall it prevent any municipal, county or state hospital from rendering

medical services to employees of such hospital or such political subdivision.

§ 13-i. *Solicitation prohibited.* Any person who shall make it a business to solicit employment for any person authorized by this chapter to render medical care to an injured employee in connection with any claim under this chapter, shall be guilty of a misdemeanor, except that the employer shall have the right subject to regulations prescribed by the commission, to recommend to the injured employee the names of enrolled physicians who he believes to be competent to treat him.

§ 13-j. *Medical or surgical treatment by insurance carriers and employers.* (1) An insurance carrier shall not participate in the treatment of injured workmen, except, that it may employ medical inspectors to examine compensation cases periodically, while under treatment, and report upon the adequacy of medical care, and other matters relative to the medical conduct of the case and that it may maintain rehabilitation bureaus operated by qualified physicians if authorized by the commissioner in accordance with section thirteen-c of this chapter. (2) An employer may maintain a compensation medical bureau at the place or places of employment, if such bureau is required because of the nature of the industrial hazards, or the frequency of injuries to employees arising out of industry. Such bureau or bureaus shall be authorized and licensed pursuant to section thirteen-c, and their use by an injured employee shall be optional in accordance with the provisions of section thirteen-a.

§ 3. Section twenty-four of such chapter, as last amended by chapter six hundred fifteen of the laws of nineteen hundred twenty-two, is hereby amended to read as follows:

§ 24. *Costs and fees.* If the court before which any proceedings for compensation or concerning an award of compensation have been brought, under this chapter, determine that such proceedings have not been so brought upon reasonable ground, it shall assess the cost of the proceedings upon the party who has so brought them. Claims of attorneys and counselors-at-law for legal services in connection with any claim arising under this chapter, and claims for services or treatment rendered or supplies furnished pursuant to subdivision (b) of section thirteen of this chapter, shall not be enforceable unless approved by the board. If so approved, such claim or claims shall become a lien upon the compensation awarded, but shall be paid therefrom only in the manner fixed by the board. Any other person, firm or corporation who shall

exact or receive fee or gratuity for any services rendered on behalf of a claimant except in an amount determined by the board, shall be guilty of a misdemeanor. Any person, firm or corporation who shall solicit the business of appearing before the board on behalf of a claimant, or who shall make it a business to solicit employment for a lawyer in connection with any claim for compensation under this chapter shall be guilty of a misdemeanor. In case an award is affirmed upon an appeal to the appellate division, the same shall be payable with interest thereon from the date when said award was made by the board.

§ 4. Section ten-a of chapter fifty of the laws of nineteen hundred twenty-one, entitled "An act in relation to labor, constituting chapter thirty-one of the consolidated laws," as added by chapter four hundred sixty-four of the laws of nineteen hundred twenty-four and last amended by chapter one hundred sixty-six of the laws of nineteen hundred twenty-seven, is hereby amended to read as follows:

§ 10-a. *Industrial council.* 1. To advise the commissioner, there shall continue to be in the department an industrial council composed of fifteen members appointed by the governor. Five members of the council shall be persons known to represent the interests of employees, five shall be persons known to represent the interests of employers, and five shall be physicians licensed to practice in this state and known to represent the schools of medical practice eligible to practice under the workmen's compensation law. The governor may remove any member of the council when such member ceases to represent the interests in whose behalf he was appointed, or, in the case of the members who are physicians, ceases to be licensed to practice.

2. The commissioner shall be an additional member of such council and act as chairman thereof. The chairman of the industrial board shall also be an additional member of such council and shall be vice-chairman thereof, to act in the absence of the commissioner. The commissioner shall designate an employee of the department to act as secretary to the council and shall detail from time to time to the assistance of the council such employees as may be necessary.

3. The members of the council shall be entitled to compensation at the rate of not exceeding ten dollars per day for each meeting attended by them, or each day actually spent in the work of the council. They shall also be paid their reasonable and necessary traveling and other expenses

while engaged in the performance of their duties.

4. The council shall (a) consider all matters submitted to it by the industrial commissioner and advise him with respect thereto; (b) on its own initiative recommend to the commissioner such changes of administration as, after consideration, may be deemed important and necessary; (c) co-operate with the civil service commission in conducting examinations and in preparing lists of eligibles for positions, the duties of which require special knowledge or training, and advise the commissioner in the selection and appointment of employees to such positions; (d) consider all matters connected with the practice of medicine submitted to it by the commissioner or the industrial board; (e) consider the qualifications for, or persons being considered for appointment by the commissioner to positions directly involving the practice of medicine, and advise the commissioner regarding the fitness of such persons for appointment; (f) prescribe rules and regulations to govern the procedure of investigations and hearings by medical societies or boards of charges against authorized physicians and licensed compensation medical bureaus as provided in section thirteen-d of the workmen's compensation law; (g) investigate on its own initiative charges made by a physician that he has been improperly refused authorization to do compensation work by a medical society or board, or by the commissioner and, if it sustain the charges, recommend such authorization to the commissioner; (h) on its own initiative investigate and pass on charges of misconduct by either a physician or a compensation bureau authorized to treat injured workmen under this chapter; (i) review the determination of charges of misconduct where the physician accused appeals from the decision of the medical society or board which took jurisdiction in the first instance. In such cases the council may reopen the matter and receive further evidence. And the decision and recommendation of the council shall be final, binding and conclusive upon the industrial commissioner.

5. The council shall adopt rules and regulations to govern its own proceedings. The secretary shall keep a complete record of all its proceedings which shall show the names of the members present at each meeting and very matter submitted to the council by the commissioner and the action of the council hereon. The record shall be filed in the office of the department. All records and other documents of the depart-

ment shall be subject to inspection by the members of the council.

6. The duties and powers of the council shall not extend to any matters affecting the administration of the state insurance fund except those which concern the medical care of injured workmen.

The provisions of sections nineteen-a and nineteen-b of the workmen's compensation law limiting and restricting professional activities of physicians or surgeons in the employ of the department, shall also be applicable to and binding upon members of the council.

§ 5. The sum of twenty-five thousand

Proceedings of the Executive Committee

In addition to routine work the Committee, at its regular meeting on June 6, 1935, considered certain matters and took action thereon that deserves the attention of the members.

In connection with a "Physicians and Surgeons Directory of Greater New York" which appears to be fostered from outside unofficial sources, the Committee disapproved insertion by members of their names, titles, etc., as in violation of the spirit of the Principles of Professional Conduct of the State Society. The Society publishes its own Directory. For a member to permit his name to appear in this unofficial "Directory" would seem to be personal advertisement.

To aid the Woman's Auxiliary project in New York State and advise concerning its formation and activities, the President was authorized to appoint Drs. H. B. Mencken of Queens, Frederic C. Conway of Albany, and John L. Bauer of Kings an Advisory Committee.

In August next there will pass through New York, British Physicians en route to the annual meeting of the British Medical Association in Melbourne, Australia. Dr. Arthur J. Bedell and Dr. Frederic E. Sondern, who were chosen earlier in the year by the Executive Committee to entertain these medical travelers from Great Britain during their transition stay in New York City, have planned to take them to the Grasslands Hospital, the Columbia Medical Center, the Rockefeller Institute, and the Cornell Medical Center, and to give them a luncheon at the New York Academy of Medicine.

Information that the ten million dollar project at Saratoga Springs is nearing completion led the Executive Committee to endorse appointment by the President of a Saratoga Spa Committee consisting of Drs. John Wyckoff, Frederic C. Conway, and George Scott Towne.

A request from the Committee on Public

dollars (\$25,000), or so much thereof as may be necessary, is hereby appropriated to the department of labor from any moneys in the state treasury not otherwise appropriated to pay the expenses of the department, including personal service and maintenance, in carrying out the provisions of the workmen's compensation law and the labor law, as amended by this act, payable from the state treasury on the audit and warrant of the comptroller on certification as provided for in section twelve-a of the state finance law.

§ 6. This act shall take effect July first, nineteen hundred thirty-five.

Health and Medical Education that it be permitted to participate with the State Department of Health and the State Association of Public Health Laboratories in organizing and directing a campaign for the prevention of pneumonia deaths was approved. It was clearly understood that this effort toward improving public health was initiated by and will remain under the control of the State Society through its Committee on Public Health, at whose instance the State Department of Health has already agreed to furnish concentrated serum and to provide convenient typing stations throughout the State.

The energetic work of the Special Committee on Workmen's Compensation Procedure was enthusiastically endorsed. Forms for use by County societies in qualifying applicants, members, and non-members under the new law had been prepared and distributed to County societies. The Special Committee presented, also, the following list of qualifications that it considers necessary for medical members of the Industrial Council under the new laws. These were accepted as follows:

- (a) The physician should have a license to practice in New York State, with registration to date.
- (b) The physician should have been practicing ten years.
- (c) His general reputation in the community should indicate a good average ability in the practice of medicine.
- (d) The physician should be conversant with Workmen's Compensation practice.
- (e) The physician should not be employed in any capacity by the Insurance Companies or carriers, or be actually engaged in the practice of industrial medicine or surgery.
- (f) The physician should not be employed by the State in any public health activity or in any paid capacity.

It was decided that the next Annual Meeting of the Society, which is to convene in New York City next year, should be held under one roof, House of Delegates and Scientific Sessions, at the Waldorf-

Astoria Hotel, on April 27, 28, 29, 1936.

On nomination by the President, the Executive Committee approved the appointment of Dr. James M. Hitzrot as Chairman, and Dr. Cassius H. Watson as Secretary of the new Section on Industrial Medicine and Surgery which was set up at the last meeting of the House of Delegates.

On nomination by the President the Committee endorsed the appointment of Dr. Richard Kovacs as Chairman and Dr. Lee A. Hadley as Secretary of the Session on Physical Therapy as provided for by the House of Delegates.

The Treasurer, Dr. Charles H. Goodrich, introduced the following resolution which was seconded and unanimously adopted:

WHEREAS, There is now under the consideration of the Senate of the United States and the House of Representatives of the United States a proposed law revising the statutes concerning the relations of the Government to Banking, known as the Banking Act of 1935, and

WHEREAS, There is well-known need for revision of some of these statutes and

WHEREAS, Title 2 of said proposed law fails to revise these statutes satisfactorily to this body of 13,600 practicing physicians in the State of New York because:

1. It substitutes short term political domination for long term judicial control by experts in banking.
2. It gives extraordinary powers over Reserve Banks to the Federal Reserve Board and to whomever may be President of the United States.
3. It extravagantly and dangerously broadens the eligibility requirements for paper submitted to Reserve Banks for rediscount and as collateral deposited for security for notes.
4. It extends the authority of member banks to make real estate loans.
5. It gives the President (whomever he may be) power to request the resignation of the Governor of the Federal Reserve Board instead of insuring his status for twelve years, as at present, and requires the selection of

the Governor to be approved annually by the Reserve Board.

6. It provides that the power to extend or retard inflation or deflation shall be vested in five men, only two of whom shall represent the various Reserve Banks, so that the political Government in power and its Federal Reserve Board—including its child the Governor—shall always be in the majority, a truly unrepresentative body in banking.
7. It provides that the Governors of Reserve Banks shall have their tenure of office subject to annual approval by the Reserve Board, thereby abolishing all independence of action within the Reserve system and tending to bring mediocre appointments or worse and

WHEREAS, The revision of such matters as are included in Title 2 is of extreme importance to every laborer, industrialist, professional man and woman, investor and banker alike and

WHEREAS, Haste and loose thinking may well provide for calamities untold to our entire people,

Be It Resolved, That the Medical Society of the State of New York hereby opposes further consideration by the Congress of Title 2 of the Banking Bill and further

Be It Resolved, That this Society urge that at least a year of consideration be given to these matters included in Title 2 by a Special Board of expert bankers from all parts of the Country, and that thereafter their findings be the chief points in a new bill placed before the Congress for action and

Be It Resolved, That a copy of these resolutions be forwarded to the President of the United States, the Senators from New York State and to the members of the House of Representatives from New York State and

Be It Resolved, That copies of these resolutions be transmitted to the New York Delegates to the Annual Session of the American Medical Association with the instruction to present them before the House of Delegates of said American Medical Association for consideration and action.

D. S. DOUGHERTY, *Secretary*

Medical Society of the State of New York

STANDING COMMITTEES 1935-36

Committee on Public Health and Medical Education

Thomas P. Farmer, Chairman, Syracuse
Leo F. Schiff, Plattsburg
Russell L. Cecil, New York
Martin B. Tinker, Ithaca
Edward G. Whipple, Rochester
Clayton W. Greene, Buffalo
Oliver W. H. Mitchell, Syracuse
James K. Quigley, Rochester
Fairfax Hall, New Rochelle

Committee on Legislation

Harry Aranow, Chairman, Bronx
Bernard B. Berkowitz, Brooklyn

B. Wallace Hamilton, New York
James F. Rooney, Albany
Leo F. Simpson, Rochester

Committee on Economics

Frederic E. Elliott, Chairman, Brooklyn
Frederick S. Wetherell, Syracuse
Joseph P. Garen, Olean
Alfred E. Shipley, Brooklyn
Joseph C. O'Gorman, Buffalo
Cassius H. Watson, New York
Frederick M. Miller, Utica
George C. Vogt, Binghamton
Edward T. Wentworth, Rochester
Homer L. Nelms, Albany
Walter W. Mott, White Plains
Morris Maslon, Glens Falls

Committee on Public Relations

Luther F. Warren, Chairman, Brooklyn
 William H. Ross, Brentwood
 Herbert H. Bauckus, Buffalo
 Arthur F. Heyl, New Rochelle
 David J. Kaliski, New York
 Augustus J. Hambrook, Troy
 Warren Wooden, Rochester

Committee on Scientific Work

William A. Groat, Chairman, Syracuse
 John S. Lawrence, Rochester
 John C. Brady, Buffalo
 John F. Fairbairn, Buffalo
 Charles J. Marshall, Binghamton
 George M. Retan, Syracuse
 Byron Stookey, New York
 Louis Tulipan, New York
 Ernest M. Watson, Buffalo
 Leo P. Larkin, Ithaca
 William A. Krieger, Poughkeepsie
 John A. Conway, Hornell
 James M. Hitzrot, New York

SPECIAL COMMITTEES

Committee on Malpractice Defense and Indemnity Insurance

Chas. Gordon Heyd, Chairman, New York City
 Carl Boettiger, Flushing
 Frederic E. Elliott, Brooklyn

Budget Committee

Chas. Gordon Heyd, Chairman, New York City
 Daniel S. Dougherty, New York City
 Charles H. Goodrich, Brooklyn

Committee on Prize Essays

James Alexander Miller, Chairman, New York City
 Edward G. Whipple, Rochester
 Burton T. Simpson, Buffalo

Committee on By-Laws and Revision of By-Laws

Daniel S. Dougherty, Chairman, New York City
 Samuel J. Kopetzky, New York City
 Lorenz J. Brosnan, New York City

Committee on Trends

James F. Rooney, Chairman, Albany
 George A. Leitner, Piermont
 Chas. Gordon Heyd, New York City
 David B. Jewett, Rochester
 David J. Kaliski, New York City

Committee to study Available Plans which come within the scope of the Ten-Point Program of the American Medical Association and draw up a model plan for bringing approved medical care to all people at a cost within their means.

Nathan B. Van Etten, Chairman, New York City
 B. Wallace Hamilton, New York City
 Joseph C. O'Gorman, Buffalo

Thomas A. McGoldrick, Brooklyn
 William P. Howard, Albany

Committee on Workmen's Compensation Procedure

Chas. Gordon Heyd, Chairman, New York City
 David J. Kaliski, New York City
 Frederic E. Elliott, Brooklyn

Journal Management Committee

George W. Kosnak, Chairman, New York City
 Samuel J. Kopetzky, New York City
 Thomas M. Brennan, Brooklyn
 William A. Groat, Syracuse
 Peter Irving, New York City

Advisory Committee to Woman's Auxiliary

H. B. Mencken, Chairman, Flushing
 Frederic C. Conway, Albany
 John L. Bauer, Brooklyn

Committee to Confer with Saratoga Springs Commission

John Wyckoff, Chairman, New York
 Frederic C. Conway, Albany
 George S. Towne, Saratoga Springs

Professional Advisory Committee to TERA

John A. Hartwell, Chairman, New York
 Louis H. Bauer, Hempstead
 Samuel E. Appel, Dover Plains
 William Hale, Jr., Utica
 Peter J. Di Natale, Batavia

Committee on Medical Research

John J. Morton, Jr., Chairman, Rochester
 John Wyckoff, New York
 Joshua E. Sweet, New York
 Allen O. Whipple, New York
 Simon Flexner, New York
 Augustus B. Wadsworth, Albany
 Edwin MacD. Stanton, Schenectady
 Herman G. Weiskotten, Syracuse
 Winfield W. Scott, Rochester
 Burton T. Simpson, Buffalo
 Peyton Rous, New York
 George J. Heuer, New York
 Marshall Clinton, Buffalo

THE COUNCIL

Frederic E. Sondern, New York
 Arthur J. Bedell, Albany
 Floyd S. Winslow, Rochester
 Thomas H. Cunningham, Glens Falls
 James H. Borrell, Buffalo
 Daniel S. Dougherty, New York
 Peter Irving, New York
 Charles H. Goodrich, Brooklyn
 George W. Kosmak, New York
 Samuel J. Kopetzky, New York
 James M. Flynn, Rochester
 Nathan B. Van Etten, New York
 Harry R. Trick, Buffalo
 James F. Rooney, Albany

George W. Cottis, Jamestown
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 Chas. Gordon Heyd, New York
 William A. Groat, Syracuse
 Harry Aranow, New York
 Frederic E. Elliott, Brooklyn
 Thomas P. Farmer, Syracuse
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 Augustus J. Hambrook, Troy
 John P. J. Cummins, Ticonderoga
 LeRoy F. Hollis, Lacona
 John E. Wattenberg, Cortland
 Alfred K. Bates, Auburn

Richard H. Sherwood, Niagara Falls

THE EXECUTIVE COMMITTEE

Frederic E. Sondern, Chairman, New York
 Samuel J. Kopetzky, Vice-Chairman, New York
 Arthur J. Bedell, Albany
 Daniel S. Dougherty, New York
 Charles H. Goodrich, Brooklyn
 Floyd S. Winslow, Rochester
 Chas. Gordon Heyd, New York
 John E. Wattenberg, Cortland
 Terry M. Townsend, New York
 Alfred K. Bates, Auburn

County Societies

Broome County

EIGHTY PHYSICIANS attended the joint session of the Binghamton Academy of Medicine, Broome County Medical Society and the Endicott Johnson Medical Society at the assembly hall of the Binghamton State Hospital on May 27, as guests of the Binghamton Psychiatric Society.

Dr. Israel S. Wechsler, of New York City, discussed "Traumatic Neurosis."

Informal discussions followed. Dr. William C. Garvin, superintendent of the Binghamton State Hospital, presided. Luncheon was served.

Chemung County

THE MEDICAL SOCIETY of the County of Chemung will celebrate its 100th anniversary in 1936. A committee of three has been authorized to make plans for the celebration.

Columbia County

THE COUNTY MEDICAL SOCIETY met in special session on June 3 at 5:00 o'clock at the Hudson City Hospital to hear Dr. H. Jackson Davis, of Albany, in charge of administration of TERA medical work, speak on "Medical Aspects of TERA."

Kings County

DR. WILLIAM LINDER, who has served on the staff of the Brooklyn Jewish Hospital for more than twenty-nine years, has received the title of "Dean of Surgery" from the board of directors. He is surgeon-in-chief at the Israel Zion Hospital of Brooklyn and Professor of Clinical Surgery at the Long Island College of Medicine.

Monroe County

A REDUCTION of hearing defects among Rochester school children to 6 per cent,

from a former figure ranging from 15 to 20 per cent, is credited to the efforts of Dr. Franklin W. Bock, who died in that city on May 3. In the 28 years since he established his first clinic he examined more than 300,000 children and treated 100,000.

For many years Doctor Bock carried on his work in the schools without remuneration. During the past few years he received a modest fee from the Board of Education. He also was keenly interested in other civic affairs.

Once when reporting on cases of 1,229 children he listed removing 16 paper wads, 11 cotton wads, two beads, one rubber band, two files, one cherry pit, one cork, one pencil point, one stone, one peanut, one head of timothy hay, and one feather.

In 1923 he announced his candidacy for mayor on an independent ticket, declaring he believed the time was ripe for a change.

"The old parties," he said at that time, "when we consider what is necessary for the well-being of the city, are not worth considering."

His thesis in his work in the schools was that in thousands of cases early care, the detection of minor ailments which might lead to serious consequences, could save the hearing. He "sold" the public on the facts that treatment of such children saved taxpayers money, once pointing out that in one school alone children who were repeating in grades, many because they were hard of hearing, were costing the city \$26,000 a year.

Tributes to his work were many in his later years. In 1926 "friends of the children" to whom he had devoted his life presented him with a new automobile.

Nassau County

THE SOCIETY at its meeting on May 28 adopted a change in by-laws establishing a

workman's compensation board in accordance with the law recently enacted at Albany requiring all medical societies to act as censoring bodies and in an administrative capacity in the matter of medical cases of injured or disabled workmen classed as compensation cases.

Dr. A. M. Bell of Sea Cliff, Dr. L. M. Lally of Floral Park, and Dr. Rudolph Dery of Lynbrook, were named to serve on the board until December 31, 1935, while Dr. L. A. Van Kleef of Manhasset, Dr. Smith A. M. Combes of Hempstead, and Dr. Wright F. Lewis of Freeport were elected to the board for a term ending December 31, 1936.

An official questionnaire will be sent to all doctors of the society and those known to the society. No doctors will be permitted to practice compensation medicine after July 1 unless he or she has filled out this questionnaire and has been approved by the new board of the society and the State Industrial Commission.

Doctors not in the medical society, who wish to participate in compensation cases are requested to communicate with the society at their earliest convenience.

New York County

THREE MOTHERS die in childbirth every two days in New York City, according to Health Commissioner John L. Rice.

DR. DANIEL S. DOUGHERTY, director and secretary of the Medical Society of the County of New York, reports that the Society's plan for the treatment of patients in the low-income group for \$1 a call will not go into effect, if at all, until the Fall.

Only 800 answers, he said, had been received to an inquiry sent to the 4,000 members of the Society, not enough for consideration of the plan.

Niagara County

THE SOCIETY has sent a communication to the Board of Supervisors requesting the board to consider the need for adequate facilities at the Niagara County Sanatorium, according to Dr. Richard H. Sherwood, president of the eighth district branch of the Medical Society of the State of New York and chairman of the committee appointed by Benjamin L. Rand, president of the Niagara County Health Association, to make application for Federal funds for the enlarging of the sanatorium.

Dr. Sherwood stated that the Society members believe that the need for additional beds has not received proper consideration in the past, in spite of previous communications from the medical profession of the

County pointing out the imperative need for larger quarters at the sanatorium.

Queens County

THE WOMEN'S AUXILIARY of the Queens County Medical Society has voted to allot \$500 to the society to furnish a committee room in its building.

Rockland County

DR. JOHN G. MAEDER, of Upper Nyack, was honored with a golden jubilee diploma for 50 years of service in the medical profession at the commencement exercises of the New York Homeopathic Medical College on June 5. He was graduated in 1885. Eleven other doctors, graduated at the same time, received similar diplomas.

Schenectady County

JUST AFTER asking a patient to wait a few minutes, as he was not feeling well, Dr. Hugo Gutmann, prominent Schenectady physician, died suddenly on June 3 in his office of a heart ailment. He was 63 years old. The patient heard the physician fall out of his chair.

Born in Germany in 1872, Dr. Gutmann was educated in that country, receiving his medical degree from the University of Berlin in 1896. He came to the United States shortly after the turn of the century and was admitted to the practice of medicine in New York State in 1903. He had practiced medicine in Schenectady continuously since that time.

Seneca County

THE REGULAR semi-annual meeting of the Seneca County Medical Society was held May 16, at the Armitage Tea Room, Seneca Falls. It was called to order by the President, Dr. E. M. Wellbery, at 5 P.M. A special menu was served at 7 P.M. to the 18 members and guests present. After the dinner which was a testimonial affair, given to Dr. John F. Crosby of Seneca Falls, who had just completed 52 years in the practice of medicine, the Secretary, Dr. Frederick W. Lester of Seneca Falls, read a brief sketch of Dr. Crosby's life and services in the practice of his profession, which was briefly responded to by Dr. Crosby. The meeting then adjourned to the parlors of the Tea Room for the Scientific session. Dr. John M. Swan of Rochester gave a brief talk on "Some Practical Phases of the Cancer Problem," which was discussed by Dr. Jacob J. Levy of Syracuse, after which a general discussion was carried out, led by some personal remarks by the President, Dr. Wellbery, after which the meeting adjourned.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Malpractice—Court Exonerates Physician

In a case* recently handled by the office of your Counsel the Court exonerated a physician of charges of malpractice and trespass. The facts were as follows:

A boy of 20 years and a few months while playing baseball in a vacant lot slipped and fell as he was running around the bases. His ankle swelled and became painful. Other boys promptly carried him in an automobile to the nearby office of Dr. M. The doctor was told what had taken place, then made an examination, with the diagnosis of partial dislocation of the ankle and possible fracture. Not having the suitable equipment, he was unable to take x-rays at the time, though he determined that prompt treatment was advisable. When he mentioned to the boy that an anesthetic would have to be given him, he was told to go ahead. Then Dr. M. called in a nearby doctor who administered ether, while he himself reduced the dislocation. After obtaining a satisfactory position he applied a plaster cast from about the middle of the calf to the toes.

Having been notified, the boy's father arrived after the cast had been applied and just as the patient was coming out of the anesthetic. He took the boy home in a taxicab. The following morning Dr. M. called at the young man's home to find him comfortable. The taking of x-rays was discussed at that time but the doctor was discharged from the case the second day before they were taken. Dr. M. never saw the patient thereafter.

Suit was brought against Dr. M. on behalf of the boy and his father in which two particular claims were made; first, that the defendant had put the boy under an anesthetic and treated him without the authorization of his parents, and second, that the defendant had been guilty of malpractice in his treatment. The claimed malpractice was that the original injury was nothing but a sprain, and that the defendant had failed properly to diagnose the true condition by not taking x-rays before rendering treatment. It was alleged that the anesthetic caused illness, and that the cast caused aggravation of the injury, delaying his full recovery for a month.

The case was tried before a judge as a non-jury case. The plaintiffs called as witnesses two physicians who were brought into the case a few days after the injury. It appeared that the first physician so attending the boy had on examination failed to find any evidence of fracture and had sent the patient to an x-ray specialist for examination. The x-rays were negative for fracture but the doctor reapplied the cast to immobilize the dislocation which the defendant had reduced.

When questioned concerning the defendant's treatment the former of said doctors testified in part as follows:

Q. Now, with no apparent injury to the boy's ankle, when you saw it at the time that the cast was removed by you, you still want us to believe that you reapplied that cast? A. Yes; why not?

Q. Is that the proper and usual therapy, in such instances? A. That is very good therapy. You could not immobilize it with anything better than plaster.

Q. But, Doctor, you found no injury there; what was the purpose of immobilizing the leg? A. We had a history of injury, didn't we?

Q. But you had x-rays taken subsequent to that history; you had your own examination. A. There is injury to soft parts. You are talking about x-ray of bones.

Q. And, Doctor, do you say that the usual accepted method of therapy for treating a swollen and discolored ankle is by immobilizing it in a plaster-of-Paris cast? A. Immobilize it any way you like; that is a matter of choice.

Q. What is the approved method, Doctor? A. There are a number of methods of immobilizing joints. There is no one approved method.

The x-ray man, in the course of his testimony, answered as follows:

Q. Now, Doctor, will you tell us whether or not the x-ray is an approved method in general use in the county of _____ to be used for the purpose of diagnosing a fracture where there is not dislocation and displacement of the bones? A. The rule is that whenever you get a history of injury whether there is—whether you think there is a fracture there or not, or whether you think there is a dislocation or not, first treat your patient, immobilize it, keep the part in position as it is. Try to prevent any pain; then order an x-ray examination to confirm your clinical opinion.

He also gave testimony that in the case of fractures with no displacement or overriding it is frequently difficult even by x-ray

* *New York Law Journal*, May 10, 1935.

to determine the presence or absence of fractures.

The Court upon the evidence determined the issues in favor of the defendant and handed down a well written opinion. Dealing with the claimed assault the Court stated in the opinion:

While the courts are not entirely in harmony upon the question of consent to the administration of an anesthetic, the better reasoning supports the proposition that, if a physician or surgeon is confronted with an emergency which endangers the life or health of the patient or that suffering or pain may be alleviated, it is his duty to do that which the occasion demands within the usual and customary practice among physicians and surgeons in the same locality. Many persons are injured daily in our city and emergency cases constantly arise. To hold that a physician or surgeon must wait until perhaps he may be able to secure the consent of the parents, who may not be available, before administering an anesthetic or giving to the person injured the benefit of his skill and learning, to the end that pain and suffering may be alleviated, may result in the loss of many lives and pain and suffering which might otherwise be prevented. I do not believe those who have devoted their lives to humanity will wantonly administer an anesthetic or fail to obtain the consent of parents before administering an anesthetic where such consent may be reasonably obtained in view of the exigency; it would be altogether too harsh a rule to say that under the circumstances disclosed by the testimony in the instant case the defendant should be held liable because he did not obtain the consent of the father to the administration of the anesthetic; as the defendant was confronted with an emergency, and as he obtained the consent of his patient. I hold that the consent of the father was not necessary.

In finding that the cause of action based upon malpractice had not been proved the Court said in part:

It is ancient learning that a physician or a surgeon is bound only to bring to the service of his patient and to apply to the case that degree of knowledge, skill, and attention ordinarily possessed and exercised by practitioners of the medical profession under like circumstances and in like localities; . . . it is his duty to use reasonable care and diligence in the exercise of such skill and the application of his learning, and to act according to his best judgment; he does not impliedly guarantee results; . . . Whether the defendant exercised the degree of care and skill required of him cannot be determined from the testimony of laymen or non-experts, since it is only those learned in the profession who can say what should have been done or what was done ought not to have been done.

On the expert testimony before me the defendant was competent to set the ankle and did so with judgment; no expert called by the plaintiffs in this case testified that an x-ray picture was necessary or that the ankle should not have been set without an x-ray; according

to the plaintiffs' experts the treatment of the defendant was proper. There is no merit in their complaint and no justification for their charges which should never have been made.

Treatment of Fractured Wrist

A middle-aged woman sustained a Colles' fracture of the wrist from falling downstairs. A few days later a doctor, who as part of his practice engaged in considerable industrial surgery, was asked by an insurance company to attend the patient. He went to her home and found that the arm had been splinted. The patient explained that she had gone to a nearby hospital where she had received emergency treatment for certain cuts and where the splint had been applied. The doctor examined the hand and arm and found a fracture of the lower end of the radius on her left arm just above the wrist joint with marked swelling. The doctor left the original splints on the arm which were holding the fractured bone in satisfactory alignment and continued to treat the patient for some time.

Subsequently a malpractice action was instituted against the doctor charging him with having improperly cared for the patient. Upon the trial of the case, before a judge and jury, the plaintiff made the claim that within a week after she first saw the defendant he applied a circular plaster-of-Paris cast which extended from the elbow, down to and including the tips of her fingers. This, of course, the defendant denied. The plaintiff's theory was that the circular cast was improperly permitted to remain on the arm for a period of about three months, which she claimed to have caused a limitation in the shoulder joint, a limitation in the wrist and inability to flex the fingers.

The case was one which presented a sharp conflict between the story which the plaintiff told and the defendant's account of the treatment which he rendered. The defendant conceded upon the trial, that if he had actually done what the patient in court stated that he did, he would have been negligent in his handling of the case. However, the jury believed the testimony of the defendant and rejected the patient's story; they rendered a verdict in favor of the defendant doctor exonerating him of the charges of malpractice.

First Little Girl: "Do you believe there's a devil?"

Second Ditto: "No! It's like Santa Claus. It's your father."—*London Daily News*.

Across the Desk

SOMETHING LIKE a hornets' nest was stirred up in Buffalo the other day when Dr. Marvin Israel, chairman of the maternity mortality committee of the Erie County Medical Society, was quoted in the press as saying that there is no such thing as "mother instinct," and that "women are not naturally inclined to motherhood." Whatever other instincts the fair sex may have, they do not lack the instinct for repartee, and what was probably the most telling reply was made by one woman who remarked rather drily: "Not being a mother, what does Dr. Israel know about it?" Dr. Israel's predicament is rather like that of the Georgia judge when a little negro boy was up before him for some petty offense. "Why don't you keep him straight?" he asked the boy's mother. "Judge," she replied, "was you ever the parent of a pufflecky wuthless cullud chile?"

A NEW LEAGUE to abate useless noises has just been formed. As we look over the American scene and see the squads of Ph.D.s who have been haranguing public meetings and legislative committees in aid of compulsory health insurance, with absolutely nothing to show for their efforts, a fine opportunity for the league's activity seems apparent.

THE ATTEMPT of the British osteopaths to gain the privilege of medical registration has completely collapsed after twelve sittings of a select committee of the House of Lords, where the osteopaths were merely asked to show a scientific basis for their claims. This they were unable to do to the satisfaction of the committee. Perhaps the best comment was unconsciously supplied by the leading representative of the osteopaths, Dr. W. K. Macdonald, who is at the same time an osteopath and a regularly qualified physician! The insufficiency of osteopathy and the need of regular medical training and education was demonstrated in the very man who was sent to prove the opposite! Q. E. D.

SOME MAY recall the editorial in the JOURNAL last year on "Handy Guides to Homicides," reflecting on the freedom with which our mystery stories tell how to do murders that are hard to detect. It was widely quoted in other medical journals. One story in particular was mentioned, which detailed fully how to kill sick relatives by slipping in among their capsules one filled with a powerful poison that would do its

fatal work, and then combine with digestive juices to form common salt, so it could not be discovered. Well, now another mystery story is out that has its lady villain kill three victims with these handy capsules, and then kill her husband with cyanide under circumstances cleverly stage-managed to look like suicide. But how can you get husbands to swallow cyanide? The authoress kindly tells how, putting the explanation into the mouth of one of the characters: "Nothing better can be found than a soft-centered chocolate for getting paste-cyanide down a person's throat. A small pellet of the stuff can be stuck through from the bottom, the hole closed so it will never be noticed, while the entire chocolate will be eaten before anything really wrong has been detected. Cyanide is bitter, but so is chocolate." By this time, if anyone doesn't know how to do a neat murder, it isn't the fault of the mystery writers.

A HEALTHY SIGN appears in the announcement of the Julius Rosenwald Fund that its efforts to bring competent medical and hospital service within reach of people of moderate means will "parallel the program of the medical profession." It is becoming more and more clear that the doctors will cast the deciding vote on any plan of health insurance that may eventually be adopted. The A.M.A. is now sifting all existing plans and proposals, and will soon have something to recommend that will take care of the patient and the doctor, too, instead of leaving the medical man to be the victim and errand-boy of the politicians. The medical profession, if it will, can shape this movement in the right direction.

THE SURVIVAL of the family physician depends largely upon himself, remarks a western medical speaker. If he keeps himself efficient and up to date, his place is secure.

WE ALL KNOW, of course, that the boys and girls of today are taller, stronger, and heavier than their fathers and mothers were, but it has taken the statistical German mind to reduce it all to figures. In Leipzig they have made records of 18,000 to 20,000 school children, running back to 1918, and also have enough pre-war records for a comparison. They find that today's Germany young folks average $4\frac{1}{2}$ inches taller and $24\frac{1}{2}$ pounds heavier than those of 1918—credible when we recall the privations of the war years over there—but they also find that today's

children are as tall as those 1½ to 2 years older of the prewar period. Maturity is attained earlier, menstruation begins two years younger than before the war. Ger many of course thinks of all this in terms of more children, more and better soldiers. But the improvement is general all over the world, at least among the white peoples, so no nation gets any special military advantage out of it. The real advantage is to the fine, upstanding young people themselves. May they enjoy to the full the more abundant life that is theirs, and help the race on to higher and better planes of living as the generations come and go. Will the increase in weight, stature and strength continue? If so, what will the future peoples be like? There anyway, is a speculation to make the imagination run riot.

A SPEAKER at a "medical meeting" of chiropractors in Kansas said in the course of his remarks that "the bones are a tube like structure through which the nerves are connected to every part of the anatomy. Which causes the editor of *The Medical Bulletin* of Wichita to scratch his head and surmise that that precious morsel of anatomical information must have been missed by us, during our days in a medical school, the day we cut class and went to see the opening game of the season and we are glad we did."

This is reminiscent of the cart tail torch light Indian medicine orator who explained to the crowd that the epiglottis switched solids into one opening and liquids into the other. A small boy guffawed and the lecturer demanded "What are you laughing at?" "I was thinking," the boy replied "how fast it must flop when you are eating bread and milk."

EVIDENCE accumulates that the brain is practically superfluous or large parts of it any way. Now Dr. Sprafford Ackerly of Louisville, reports to the American Psychiatric Association a "two year study of a woman whose right and left prefrontal lobes were removed because of brain tumor three successive operations normal recovery." It seems, according to his report that following brain tumor symptoms over a period of three years this young woman was removed to the hospital for operation. This disclosed a tumor of such size that two successive operations were necessary to remove it. The left prefrontal lobe was destroyed by the tumor and the right had to be amputated to remove it. Seven days after the last operation the patient was up and about the ward. Her attitude and behavior four months later was

one of exhilaration, overactivity, pliancy, fullness, and facetiousness. She worried about nothing. During the second year, however, these symptoms disappeared and now she appears to be quite normal except for an unusual capacity for concentration which is described as a lack of ability to be distracted. Once she has started to do something. The disquieting thing is that modern surgery is proving so many parts of us superfluous as to suggest that man himself is unnecessary.

A FINE PICTURE of the skillful surgeon appears oddly enough, in a new book of short stories called the *Third Omnibus of Crime*, as if crime were being taken for a ride in three bus loads. This particular story is about a surgical operation and is written by Sir Frederick Treves. He opens with this characterization.

The good surgeon is born not made. He is a complete product in any case and often something of a prodigy. His qualities cannot be expressed by diplomas. It may be possible to ascertain what he knows but no examination can elicit what he can do. He must know the human body as a forester knows his wood, must know it even better than he must know the roots and branches of every tree the source and wanderings of every rivulet the banks of every valley, the flowers of every glade. As a surgeon moreover, he must be learned in the moods and troubles of the wood must know of the wild winds that may rend it of the savage things that lurk in its secret haunts of the strangling creepers that may throttle its sturdiest growth, of the rot and mold that may make dust of its very heart. As an operator moreover, he must be a deft handicraftsman and a master of touch.

The surgeon's hands must be delicate but they must also be strong. He needs a lacemaker's fingers and a seaman's grip. He must have courage be quick to think and prompt to act be sure of himself and captain of the venture he commands. The surgeon has often to fight for another's life. I conceive of him then not as a massive Hercules wrestling ponderously with Death for the body of Alcestis but as a nimble man in doubtlet and hose who over a prostate form fights Death with a rapier.

A NEW FIELD for specialization is social imbecility says President Raymond Walters of the University of Cincinnati. The disease seems to be epidemic and spreading like wildfire to judge from the flood of fool health bills offered in our legislatures year after year. Whether its victims would pay for being cured is doubtful.

Books

REVIEWED

An Activity Analysis of Nursing. By Ethel Johns, R.N. and Blanche Pfefferkorn, R.N. Duodecimo of 214 pages. New York, Committee on the Grading of Nursing Schools, 1934. Cloth, \$2.00.

The Committee on the Grading of Nursing Schools included as a project in its Five-Year Program, a study of nursing procedures, or a job analysis. This book reports the findings of that study. As outlined in the preface, it tries to answer the question: "What is good nursing?" and with the qualifications constituting it in mind, treats of curriculum making, stressing especially the functional approach to the formation of teaching programs.

The point of view of the patient, physician, hospital, community, and of the nurse herself is discussed in considering the question of what a professional nurse should know and be able to do. Details of nursing activities are included and lists of conditions requiring nursing care in the hospital and the community in the order of their frequency of occurrence.

One is impressed and encouraged by the prominence given to the fact that more instruction and experience in the communicable disease, nervous and mental disease, and health supervision and public health services are necessary in a well-rounded curriculum. Twelve nursing aspects are mentioned and defined. Individual nurses can profit by reviewing these in the light of their own preparation, and hospital administrators may question whether their training and teaching facilities completely embrace all these. Nearly one-half the book is taken up with tables of nursing activities in hospitals, public health work, and private duty nursing in the home, and conditions—lists, which present the situation in a form which can be quickly and easily scanned.

The Committee feel that this study is not entirely complete and have outlined further phases to be taken up. However, the book as it is will be a valuable aid to heads of nursing schools and other educators in planning curricula, to physicians in suggesting ways of co-operation, and to the individual nurse in helping her to examine her professional equipment and find ways of improvement.

MAUDE E. TRUESDALE

Mortality Among Patients With Mental Disease. By Benjamin Malzberg, Ph.D. Octavo of 234 pages, Utica, N. Y. State Hospitals Press, 1934.

This book is a detailed statistical record of mortality among the patients in the New York Civil State Hospitals for three fiscal years, ending June 30, 1931. It is a comparative study of the causes of death of the patient and general populations with respect to sex and age groups. It is doubtful if it can be considered interesting or easy reading for any one but a statistician. Yet, as with any carefully compiled statistics, it is illuminating and should serve as a guide to the application of much needed medical effort, both curative and preventive.

A. E. SOPER

The Jew in Science. By Louis Gershenfeld. Duodecimo of 224 pages. [Philadelphia, Jewish Publication Society of America], 1934. Cloth, \$2.75.

The aim of this book is to show in an impressive way the contribution of the Jew to science. The first 90 pages, deal with pre-modern history. The reader will, however, be more interested in the succeeding chapters devoted to the modern era. Almost an endless array of names is classified according to nationality and the particular branches with which they are identified. About 80 pages are directed to European scientists, and half to Americans. In a number of instances their importance is attached to outstanding discoveries; in others, to important or influential positions; and in some, without mentioning it, apparently to prominence in Jewish activities. And so we read of such names as Steinmetz, Michelson, Fuchs, Javal, Hajek, Binet, Kraepelin, Herschel, and numerous others of equal fame.

It would appear that while the author was generally competent and critical in his selections, further improvements could have been effected through some omissions and annotations. Such names as Bucky in roentgenology, Schoenberg and Goldstein in ophthalmology, Friesner and Yankauer in otolaryngology, and Zworykin in photo-electricity compare favorably with those listed, and yet are conspicuously absent.

EMANUEL KRIMSKY

SOME PHYSICAL ASPECTS OF MENTAL DISEASEGREGORY ZILBOORG, M D, *New York City***I**

The present status of the relationship between medicine and psychiatry is in many respects more confusing than it was a hundred years ago. A century or so ago the medical man who became interested in psychiatry would delve into and proceed to utilize his pharmacological armamentarium, and if any of his drugs produced a change in the clinical mental picture, he felt that he was either quite successful or that at least he was working in the right direction. As a matter of fact, this pharmacologic approach to psychopathology was considered the only rational approach (bloodletting was the second valuable variant), and we find such a clinician as Reil had called it the "psychological" method. It was a palliative approach, a grossly empirical method of trial and error. Yet no matter how erroneous this approach was, it was in keeping with the best and the soundest traditions of medicines—for medicine, I mean practical, clinical medicine—has always been an empirical science. It is true that in the course of the past hundred years medical research has begun to avail itself with ever increasing assiduity of the findings and methods of other sciences such as biology, physics, chemistry, and so on, but it is not less true that at the bedside, i.e., when in direct contact with a patient, medicine remains an empirical science and depends largely on the empirical method of checking up on its results rather than on the theoretical preconceptions the given clinician might have. The patient's recovery or the autopsy will always tell how right or how wrong he was. On the other hand, the

psychiatrist has few homogeneous recoveries and fewer, if any, telling autopsies, and while this is also an empirical method he has learned more and more to draw on sociology, psychology, and anthropology in order to understand the pathological processes he has chosen to deal with. As to the neurological, physiological, and biological factors, these he takes for granted, of course. These help him a great deal in problems of theoretical pathology, so to speak, but in his daily practice, they are as a rule of as little help as embryology or histology in the daily treatment of a pneumonia or a dislocated shoulder.

It is hardly necessary to elaborate on the obvious fact that our usual medical knowledge is removed a considerable distance from the fields of sociology, psychology, and anthropology. Moreover, these disciplines are descriptive and observational, they are not experimental. Hence there is a large and deep chasm between the medical and the psychiatric physician. The medical man continues to develop an increasing contempt for the speculative that he sees in psychiatry, and the psychiatrist continues to develop an increasing haughtiness towards the medical man's alleged "limitations," "lack of knowledge," "lack of understanding," and so on. In order to bring about a rapprochement between the two, frequent attempts are made in a manner both earnest and impervious to rise or to descend to one another's level. Knowing in advance that sociology does not mix well with meningitis, and that anthropology does not mix better with complement fixations, the psychiatrist then tries to

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tell the medical man how certain severe organic conditions will produce febrile or afebrile deliria, or the medical man tries to "psychologize" on the basis of the so-called common sense. One must not forget, however, that deliria of organic origin in no way solve the psychiatric problems with which the medical man has to deal and that they are in no way new; Hippocrates, almost twenty-five centuries ago, described some of them and told us, for instance, how he observed a "mania" caused by a bleeding nipple in a woman. Nor should one forget that common sense, while it is common, is apt to change with the tide of time and is the most unreliable tool to work with. First of all, common though it may be, it depends a great deal on the subjective bias of the bearer of this common sense. Moreover, what is common sense today may prove to be common nonsense tomorrow. Common sense made people in the days of Hippocrates consider it natural that the breath of Apollo was responsible for certain conditions which we would call today expansive paranoidias with grandiose trends. To be sure, a medical man cannot always be a well versed historian of medicine, but he should not forget that at one time it was considered quite good common sense to believe that the devil can get into the human body in the form of such inanimate objects as nails, pieces of wood, or knives, and so on, and that such excellent clinicians as Lange and Ambroise Paré took this for granted in their autopsy work. In the sixteenth and seventeenth centuries, it was also considered good common sense to demonstrate the presence of spirits in the human blood through exposing fresh blood to the air and watching the vapors rise from it. Common sense is a fragile entity and even in the hands of the best scientist it may prove too delicate a matrix for any solid structure. It is quite evident that no rapprochement between medicine and psychiatry is possible as long as these two disciplines endeavor only to teach one another their respective languages without finding any more solid common ground. We may learn to use freely all the words, but we shall learn little about the clinical conditions at hand. This lengthy introduction to a comparatively brief communication has

but one purpose—to state that the only method of bringing physicians together is that of bringing them together at the bedside. In other words, we must return to medical clinical empiricism, leaving theories to the theoretician, terminology to the philologist, and other refinements to the other masters in their respective fields. We shall confine ourselves to direct clinical observations and to little if anything else.

This being understood, a few words of warning are necessary about another frequently confusing point. The medical man at the bedside is wittingly or unwittingly interested in attaining one goal—the therapeutic goal. In order to attain it he tries to master the art of diagnosis. This becomes not infrequently an art in itself, but never a goal in itself. The internist is not as fortunate as the surgeon in this respect. The surgeon has the opportunity to verify his diagnosis every time he performs an operation. That is the first thing he does immediately after he exposes the field of suspected pathology. The internist occasionally has the same opportunity at an autopsy, but most of the time the therapeutic result is the only verification of his rational diagnosis. If the therapy applied on the basis of his diagnostic assumption proves successful, he is inclined to believe that he was right. It is obvious that this method puts certain rather serious scientific limitations on the physician, for it is difficult at times to differentiate between the therapeutic success obtained through palliation and the success obtained through clear cut causal therapy. Salicylates in rheumatic fever, opiates in diarrhea, give point to this contention. Hence, whenever we discuss a problem of differential diagnosis, great caution is required to avoid confusing the issue. In this respect the physician and the psychiatrist find themselves in the same scientific situation as the astronomer. Some of the facts and the processes the astronomer is called upon to observe, he observes indirectly and can never verify by experimentation. He verifies his assumptions by the method of correct prediction. Thus if he calculates the time of the next solar eclipse and his prediction consistently proves correct, then his hypothesis, i.e. his diagnosis and

prognosis is correct. Similarly we observe, study, and predict the course of a pneumonia, a typhoid fever, a catatonic attack, or a depressive psychosis, and if our predictions are borne out, we are in all probability right in our hypothesis as to the nature of the chief features of the clinical conditions at hand. It is clear that this "astronomic" characteristic of some aspects of medicine and psychiatry is particularly true of psychiatry, and one never loses sight of this point without running the risk of losing the whole perspective of the problem. So much for the preliminary orientation as to the general aspects of the problem of diagnosis. However, to avoid any misapprehension, it should be stated that no matter how pure and detached clinical observations may appear, they are always somewhat clouded by the observer's memories of his past observations and they are partial in so far as he compares what he sees with what *he thinks* bears a similarity to what he has seen before. This choice of points of similarity and dissimilarity is to a great extent a subjective psychological process which creeps unnoticed into the supposedly clear field of observation. In other words, the observer, the most detached and pure observer, is biased by his previous scientific training, experience, hypothesis, and even theories. Bearing this in mind, it is clear that this communication cannot be considered totally unbiased or devoid of certain scientific assumptions, no matter how desirable it is theoretically to be totally pure and totally detached. For such total purity and detachment just does not happen to exist clinically.

II

A word or two about the diagnostic methods prevalent today in clinical medicine when one tries to differentiate between the organic and psychological nature of a physical symptom. The psychiatrist has acquired a mass of clinical observations or impressions and thus "knows" that very depressed people happen as a rule to be constipated, or have acne-form eruptions on their faces and bodies, which symptoms and signs disappear some time after the depression lifts, however, should he observe persistent constipation or the above men-

tioned acne before the depression sets in, he has but limited if any knowledge as to how to differentiate these symptoms from purely organic pathogenesis, and he then proceeds in the same manner as the medical man, i.e. he proceeds to search for a diagnosis by the method of elimination. This method seems to be not so much the method of choice, but more that of necessity. Many and all possible examinations and tests are made, many and all modes of therapy are applied, and if no satisfactory results are obtained, the diagnostic pronouncement is made "It must be psychological," or as some still say, "It must be neurological." This method is first of all quite unscientific because, no matter how thorough we might be, we could never boast of knowing everything and could never be certain that we had omitted nothing, that is to say, no matter how thorough we might be, we could miss an organic condition the existence of which we happened to forget or the nature of which has as yet to be discovered. Hence, to say the least, the method of elimination is scientifically unconvincing, for we are hardly justified in stating that something is something definite because it appears to be nothing else that we can think of. Moreover, the method of elimination is quite inefficient and is almost always injurious to the patient because this method, to be used correctly, requires a long time—weeks, months, and years even—and as a result the patient in the meantime develops an increasingly serious neurotic state which becomes chronic and no longer amenable to any successful therapy whatsoever. This statement might, of course, appear to be an exaggeration, but an illustrative case or two will easily remind every clinician that the name of such cases is legion.

A woman, 61 years old, spends her time in a state of semi comfortable invalidism in a mental hospital. She is unable to walk. She firmly believes that her legs, which are flexed, should be operated on—barring this, that a part of her colon should be excised. She is on the whole very well physically and her cardiovascular system, despite her age, is in good order. Her mind is clear. Her emotions are not pathologically disturbed. She has no psychosis. She is diagnosed as a psychoneurosis, but apparently it is a

chronic psychoneurosis not amenable any more to very effective therapy and the prognosis is poor. This woman began to complain of constipation, headaches, and eye strain since her early youth. At the age of 17 she was already addicted to laxatives, purgatives, and enemata. That both the complaints and the addiction to the above-mentioned treatment were definite symptoms of a neurosis was apparently overlooked. When she was married at the age of 23, her gastrointestinal difficulties became worse; she soon began to insist that she had gonorrhea which was never confirmed medically or surgically. She became addicted to colonic irrigations and rectal and vaginal massage which were given her by a woman physician. The patient thus dragged on until the age of 37, having undergone in the meantime two pelvic operations, one of which was a hysterectomy. No definite pathology was revealed by those operations to account for her life-long complaints. Following the last abdominal operation, her eyestrain and headaches appeared to clear up but instead she soon developed the fear of having no control over her bowels. She thought that the contents of her intestines "wanted" suddenly "to rush out" from her body through her left abdominal wall or through her rectum. Between the ages of 37 and 52, i.e., for a period of fifteen years, she was under the care of a psychiatrist and felt reasonably contented, but she was unable to get along without supervision, and her eagerness to continue with her operative career which she had so successfully begun finally brought her to a mental hospital.

It is quite evident that this case reached a chronic state after almost twenty years of eliminative diagnostic technic with its concomitant surgical history. The same characteristic failure of diagnosis and subsequent therapeutic failure can be seen in the following case.

A woman of 46. Unmarried. For many years, since early youth, she had been complaining of various pains and aches. In due time she had her appendix removed and her round ligaments were shortened. Later she was reported as having developed an "extensive furunculosis of the thigh" at which time she was supposed to have a systemic infection. Later she developed repeated attacks of pyelitis which cleared up. Her chief complaint of pain in her right side, described by her as drilling pains, continued, without respite. Sedatives of various kinds were resorted to. Her gall-

bladder was removed; there were no stones. A urological examination about that time revealed a moderate right pyelectasis with a stricture of the lower ureter without pyuria. Dilatation of the ureter was resorted to, then decapsulation of the kidney and stripping of the ureter. The pains continued; severe attacks were relieved by the frequent use of various sedatives. Nerve block by means of alcohol was resorted to (lower thoracic and upper lumbar sympathetic ganglia). The procedure was repeated. Examination revealed that she had no more ureteral stricture. It was at this point that I was consulted and asked to determine whether the patient had a fixed neurosis or whether she "may have acquired the surgical habit." It was a point to be cleared up preliminary to a possible nephrectomy. The patient went carefully into her own history and the eagerness with which she tried so very hard to convince the psychiatrist how genuine her pains were, how real; the careful circumstantial descriptions she gave, all the time resorting to assurances that she was telling the truth, and so on, almost gave the impression that we were dealing with the typical reaction of a so-called "compensation case." However, the woman had nothing rational or tangible to gain from her illness except another serious operation. It was quite evident that here was a case of a so-called pathoneurosis, that is to say, a case of an individual whose neurosis sooner or later succeeded in centering on a point of real pathology, and she was unable to get off the point even after the pathology was removed. It is unnecessary here to go into any of the details of her past history; she was obviously a case of delayed diagnosis.

No physician or surgeon in the face of hopeless cases ever feels quite so helpless as a psychiatrist when he is finally called upon to make some constructive suggestions in a case like the above. All he has to offer is a belated diagnosis which is devoid even of academic value. Hence the evidence against the method of elimination, radical or conservative, appears complete.

III

Is there any other method of differential diagnosis that bids fair to be less expensive and less destructive to the patient? Unfortunately it is impossible to answer this question in the affirmative without certain qualifications. Many

conditions appear quite obscure and require prolonged and careful study. On the other hand, enough clinical data have been accumulated to make us certain of some conditions and of some typical symptoms. Let us take as an example such a condition as asthma. Frequently the diagnosis appears almost unnecessary in such cases because the popularization of medicine has taught our patients to make their own diagnosis on many occasions and to repair to the corresponding specialist. It is unnecessary to relate in detail how meticulous the tests for various allergic reactions are. Many asthmatic patients spend literally years on being tested and treated. In no other condition is the method of elimination applied with such thoroughness, and yet a certain type of neurosis does quite frequently, or at least not infrequently, choose to appear under the guise of a bronchial asthma. This neurotic asthma, while so similar to is essentially different from, allergic bronchial asthma. The latter, as is known, is characterized by difficulties experienced by the patient in the expiratory phase, while the asthma which is the concomitant or the expression of a neurosis characteristically represents difficulties in the inspiratory phase. What theoretical explanations we might find for this fact, and what formulation we might give to the theory of it, does not really matter. The orthodox psychiatrist will perhaps find a "constitutional weakness" of the respiratory tract of the given individual and he will look for the hereditary factor in cases of psychogenic asthma. The psychoanalyst, on the other hand, might say that in certain cases of severe oral fixation, at the time of particularly severe deprivation regression to the oral level ensues, the oral cathexis, in part or in whole, is then displaced onto the bronchial apparatus and thus dominates the phase of intake.

To the clinician who is called upon to make a diagnosis, one formulation appears as fatalistically hopeless as the other would appear hopelessly fantastic and verbose. Hence, whatever contribution psychiatry or psychoanalysis might make to the theory of asthmatic afflictions, the diagnostician might well be satisfied with the empirical fact that psychogenic asthma is characterized by

difficulties in the inspiratory phase and that whenever this characteristic is observed in an asthmatic attack a psychiatric opinion should be sought. Needless to say, this statement is of necessity oversimplified. In practice it is very rare to find an individual who is afflicted with neurotic asthma alone without the accompaniment of a number of other suggestive symptoms and signs. Such an oversimplification helps us to emphasize another point of clinical importance, namely, that so called conversion symptoms do not necessarily monopolize the gastrointestinal tract as we are accustomed to believe. We might state that, as a general rule, while exceptions are not unknown, the neurotic mechanisms of conversion have a predilection for the whole domain of the sympathetic and the parasympathetic systems. Conversion symptoms are not based on some esoteric, extra-organic or extra-biological processes, they develop within and through the body organs and their innervations. How they develop no one as yet knows, but it is clear that when one is amused and laughs, one has to have a nervous apparatus to affect the risorn and pharyngo laryngeal musculature, but one also must be amused at the same time. When one is frightened and grows pale, one must needs set into play the adrenal secretions and the whole vasoconstrictor system of the face, but one must be frightened too at the same time. In other words, the emphasis of the psychogenic forces in no way intends to dispose of the whole field of anatomy and physiology as unnecessary appendages to our psychic life. The problem is both more simple and more complex. It is more complex because we know too little about it and our ignorance still outweighs our best ambitions and our best theories, but it is also more simple if we bear in mind that if we are ever to find a correct answer to the vexing question of *how* all these things come to happen, we have to continue to collect as much purely empirical data as we can and while engaged in this business of collecting data refrain from giving vent to our natural impulses to speculate and to explain. While we might always be ready to speculate, we are not always prepared to explain.

To return for a moment to the diag-

nostic differentiation of asthma: it might be of some interest to mention that a patient of mine suffering from a psychogenic asthma showed at various times and for a period of years a number of other conversion symptoms such as nausea, skin eruptions, and the like, which would come and go always with the ebb and flow of certain definite mental states. In other words, one cannot reiterate too frequently that no single symptom ever appears singly and that if we do single out certain symptoms we do it artificially and for purposes of greater clarity only.

Another symptom which is met with perhaps less frequently and mostly in men deserves nevertheless serious attention: that is, unusual sweating of the hands which may and may not be associated with excessive lacrymation.

As a rule this symptom is intimately connected with severe anxiety, but this anxiety may or may not always be obvious clinically. Thus one patient was clearly aware of being anxious and tremulous while his hands were sweating though he naturally was unable to control either, while another patient was not at all aware of being anxious but he always felt uncomfortable when going to a party or any other gathering because his hands were sweaty and consequently he felt self-conscious. He would thus avoid appearing among people and while alone his hands remained mostly dry. This symptom, whether or not accompanied by conscious anxiety, is frequently one of the earliest signs of a severe neurosis which has a paranoid cast and is as a rule an early forerunner of schizophrenia (dementia praecox). This very fact makes it naturally quite pertinent that a diagnosis be made very early. Usually it is not very difficult to do so, for even a cursory glance into these patients' histories and personalities will reveal that they are rather passive, slow individuals, submissive men who get along more or less as long as they are not called upon to advance or to better themselves in any way. They are extremely critical of authority and yet extremely submissive. They will "boil inside" but outwardly they are rather timid people. A little probing into their intimate lives will reveal transient or almost total impotence or *ejaculatio praecox*, fear of marriage, or if they

happen to be married, fear of having children. Needless to say, as far as their chief complaint is concerned—the severe hand sweating—it might be got rid of on occasion by atropine, but to do this is equivalent to giving morphine before examining an acute surgical abdomen. Moreover, mental conditions have a singular characteristic which a clinician must always bear in mind: if a symptom of neurotic choice is destroyed artificially, i.e., by means of medicaments or surgery or their equivalent, a new and more persistent symptom will arise. This could be easily observed in our woman of 61 who, as soon as operative interference relieved her of eye strain and constipation, developed the neurotic fear of losing her bowels. The neurotic process possesses an uncanny ability to develop quickly neurotic anastomoses, so to speak, and it will find an outlet no matter how many outlets we might be able to cut off. This is the reason why we are so frequently faced with the very paradoxical situation in which a conservative attitude of *not* treating directly a certain neurotic symptom and making an early diagnosis instead, are more important than the apparent relief provided by means of a very efficient quick measure. This point cannot be over-emphasized because certain individuals are apt to be driven to the very entrance door of a severe psychosis, once their symptom of neurotic choice is too vigorously attacked.

A girl of 27 suffered for many years from what is at times called an irritable colon. She had frequent diarrhea or too many soft stools a day. Her usual weight would have been about 120 pounds, but at times she was as much as 30 pounds underweight. Medicamentous, dietary treatment and colon irrigations were of no avail. She frequently "suffered from gas" coming up from above or per rectum. She was convinced, and so was everybody else, that something was terribly wrong with her lower intestines, and for a long period of years she had been treated by various physicians. The mental symptoms were apparently negligible; she was distressed and her distress was ascribed to her being ill for such a long time. Occasionally she would skip one or two menstrual periods and each time the menstrual regularity was re-established, she would go through a period of excessive irritability. Another thing that stood out was an aware-

ness of unaccountable, excessive rage that would get a hold of her every now and then. She would then hate her father, or her brothers, or her male friends, or her girl friends, of whom she was otherwise rather fond. Her intestinal condition was considered the natural source of her fits of temper. She looked pale, pasty, and tense, but would always rise to the occasion when with people. There was no evidence of any other pathology, although she was studied rather carefully for a number of years. Finally, she consulted a physician who decided to attack her illness more vigorously. Evidently he recognized the neurotic nature of her trouble, or he did so at least to some extent. The patient was put into a hospital and subjected to a severe dietary regime. She began to gain weight and for the first time in years her bowels began to move regularly and the stools to be of proper consistency. However, a new condition upset the whole situation. She began to have auditory hallucinations of music; she began to develop states of severe anxiety accompanied by obsessional incestuous phantasies in which her father and her two brothers were involved. In short for a time it looked as if she entered an acute psychotic state.

This case leads us to two definite and instructive conclusions. First, it corroborates the statement made above that a physical symptom, no matter how severe, might prove such a valuable neurotic point of concentration that before it is attacked, the neurosis itself—that is, the individual as a whole—should be treated psychologically, or else there is always the risk of removing something so vital (neurotically) that even a disintegration of the personality might set in. This girl was removed from the hospital, she was treated psychoanalytically, and as her neurosis was resolved her gastrointestinal symptoms and menstrual difficulties disappeared. The second instructive point in this case concerns the chief subject of this communication. A more definite early diagnosis was quite possible in this case. The girl's unaccountable attacks of rage are not a rare psychological concomitant of such gastrointestinal symptoms as she had and which could be technically called anal expulsives—a combination characteristic of a certain type of neurosis. Moreover, a brief excursion into her history when the anamnesis was taken revealed the fact

that her younger brother, when she was six years old (she was the oldest child), suffered from what she called ileocolitis and she proceeded to describe the boy's illness in minutest detail and with great intensity and a profusion of tears. While it does not always—not even very frequently—happen that a patient offers us such a transparent clue to a very serious condition, it does happen, however, and when it does it is highly instructive. Evidently (and in the course of the treatment this was amply corroborated) one of the major factors in the production of this girl's gastrointestinal symptoms was a neurotic identification with her little brother who at one time had a severe intestinal illness. Of course not all girls whose little brothers have ileocolitis develop severe gastrointestinal neuroses, but this factor of identification or neurotic imitation, if you will, does play an important role in many a case and therefore, a careful intimate family history with this point in mind will frequently give us a lead that would suggest the need of a supplementary psychiatric investigation before any treatment of the presenting physical symptom is undertaken. Again it must be remembered that the whole picture of the case is rather simplified here, but when the patient presented herself she offered just this simple picture. The complexities and finer structure of her illness revealed themselves only later in the course of treatment and they do not concern us here.

It would be wrong however to assume that only a careful psychological anamnesis would reveal to us a leading hint as to the nature of a given physical symptom of psychological origin. The whole problem does present itself to us at times even under a much simpler aspect. Let us take as an illustration another case.

A man in his early forties whose general physical and mental condition are proven upon examination to be satisfactory, complains chiefly of a slight pain in the rectum and of constipation. A careful examination and history reveals nothing untoward. One might now at once embark on very elaborate investigations subject him to a proctoscopic examination give him a barium enema and so on. All these things are undoubtedly indicated. Let us assume however, that

the symptom might be of neurotic origin. It is well to remember that should it prove of neurotic origin, an increased concentration on his locus of neurotic choice will undoubtedly increase the severity of the symptom, or if some medicamentous therapy is used, or if the patient following all the examinations is convinced that "there is nothing the matter with his rectum," his neurosis will seek another outlet. As a matter of fact, should his rectal complaint prove neurotic in nature and should it be removed without psychotherapy, he will probably develop a severe depression, because depressive reactions happen to be intimately associated with neurotic spasticity of the lower bowels. Evidently a psychological investigation running parallel with the physical one is indicated. Yet, before referring such a patient to a psychiatrist, the physician who would want rationally to exclude or to disclose the possible psychological factors in this symptom can proceed for some distance without the help of a psychiatrist if he happens to know that such rectal complaints, if they are neurotic, are associated with a great deal of anger, rage, indignation, and so on, which as a rule are concealed and buried in the unconscious, as we say. He then proceeds to probe into the patient's life. He wants to know exactly when and under what circumstances the rectal trouble began. At first it does not appear very easy to trace the symptom, but one soon learns that the patient's wife has been for some time tense, nervous, demanding, unreasonable, and so on. The patient, however, takes it all without a shadow of protest. He is almost sentimentally kind and is all sweetness and light, although in business and with other people he does not appear to be so submissive, so tolerant, and so happy to accept trouble. As a matter of fact, one night his wife woke him up at about 3:00 A.M. because she could not sleep; she was lonesome; she wanted him to talk to her; he did her bidding with the graciousness of a knight and the simplicity of a lamb, but this did not prevent his neurotic partner from giving him a scolding anyway. Within less than 48 hours he presented himself in the doctor's office with his rectal trouble. Evidently the patient should normally have been angry but was not; he concealed his anger from himself, but he paid for this maneuver with a physical symptom which may or may not lead to further psychological difficulties. It probably will. All physical investigations yielded negative results.

This case was chosen merely to demonstrate what is known in psychiatry as the

precipitating factor. This factor is of paramount importance not only for early diagnosis, but for a general understanding of the structure of a given neurosis or psychosis. That is why psychiatrists search for the precipitating factor even in well defined or advanced psychotic conditions, for these factors when carefully studied serve as a lead into a better choice of therapeutic attack.

IV

The very few illustrations given above by no means exhaust the problem. They don't even fully outline its general scope. It would be impossible to exhaust this problem without a detailed and elaborate study of hundreds of cases and it would be impossible to embrace its scope fully without further well organized and properly co-ordinated research. The illustrations given have but one purpose in mind: that of indicating that purely clinical joint studies of psychiatrist and medical man could probably solve many a diagnostic puzzle leaving temporarily all theoretical systems aside. Such studies have a great deal in store not only to satisfy the diagnostic curiosity of the physician, but what is much more important, it might more easily satisfy his chief interest—his therapeutic intent. Many a striking condition could have been mentioned in this communication to amplify and to elaborate on the principal point, but this would have prolonged it beyond the advisable confines and, also, it would have brought in too many additional elements that would have complicated what was intended to be simple. Suffice it to say, however, that such phenomena as rectal bleeding, particularly in men, or pernicious vomiting and salivation in women which look like typical reactions of a toxemia of pregnancy, have their psychological counterparts, and when differentiated in time and correctly from an organically conditioned lesion in the lower bowels or a real toxemia of pregnancy, some striking therapeutic results are obtained. Such a differentiation is neither a mystery nor is it outside the scope of the general medical man.

One may mention, in conclusion, that the patient's own attitude towards his or her symptoms is of great diagnostic sig-

nificance. Thus the obsessional neurotic and the potential depressive is as a rule extremely solicitous of his or her symptoms. These patients, like our woman of 46 with her genitourinary difficulties usually build up a case for themselves which they are ready to plead "under oath"—she actually used these words. On the other hand, the hysteric or the potential schizophrenic faces his symptoms with comparative equanimity. Many a tachycardia accompanied with a sense of detached amusement and emotional poise appear to be one of the earliest

signs among the physical accompaniments of incipient schizophrenia.

It is clear from the above that a physical symptom, even when it is the first, presenting signs of a mental illness is not necessarily confined to what is known as conversion hysteria. The conversion process is protean in form and universal as far as clinical pathology is concerned. That is the reason why a few isolated symptoms were chosen here for discussion rather than clinical entities in their totality.

14 EAST 75TH STREET

THE EFFECT OF POLLEN THERAPY UPON THE COMMON COLD IN HAY FEVER SUBJECTS

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In the numerous publications on the "Common Cold" very few authors have ever really mentioned how these colds are influenced by pollen therapy in hay fever subjects. That those suffering from hay fever or asthma are usually more subject to upper respiratory infections than individuals not presenting these allergic manifestations is a well known fact to be sure; hence the reason why patients with hay fever quite often give a history of frequent attacks of "common cold," i.e., acute infective rhinitis, especially during the winter months.

Gay¹ quotes Hermann and Doull who found among 160 volunteers that each averaged 3.6 colds during the year, October 1, 1928 to September 30, 1929. That the average duration of each cold was approximately 12.5 days, or a total of 45 days of colds during the year. That a pollen sensitive individual without treatment will average from 42 to 70 days of symptoms.

Smiley investigated the habits, histories and physical findings of cold susceptible persons with normal individuals and says:

The physical findings and defects of the two groups were compared and found to be almost the same. Comparison of the medical histories of the two groups however showed a greater past incidence to infec-

tious disease in the cold susceptible group and a greater past incidence of hay fever and asthma in the cold susceptible group than in the normal group.

The author was impressed by clinical observations and by the statements of many of the patients, that they had lost their susceptibility to colds during the winter months following a course of specific pollen therapy.

In this study our interest was directed to those cases only, which had no organic nose and throat lesions such as sinusitis, or infected adenoids and tonsils. Patients were also eliminated who in addition to their seasonal hay fever, also suffered from perennial hay fever symptoms from such air borne substances as dust, dander, orris and the like.

In reviewing the literature upon this subject it is found that this point was mentioned only casually by some authors. No one offered any theory to explain the findings.

Cooke² observed this occurrence in many of his patients. Gay, in the paper mentioned above, points to the economic gain from the treatment of pollen hay fever and pollen asthma in shortening the course of respiratory diseases of the infectious type.

The author has reviewed the histories of 200 treated cases of hay fever

Read before the Society for the Study of Asthma in Atlantic City, N.J. April 28, 1934, a discussion of which appeared in the Journal of Allergy March 1935.

observed from 1 to 6 years, and finds that 53 gave a previous history of frequent colds usually in winter. After their first seasonal or perennial course of treatment with pollen extract, 36 of the 53 stated that they had been relieved of head colds throughout the winter months following their treatments. Of this total number, 25 were sensitive to ragweed, 8 to timothy, and 3 to both ragweed and timothy. The 17 cases not relieved of winter colds did not have much relief from the pollen injections.

A case history will suffice to illustrate the point.

B. C., a woman 25 years old, admitted July 18, 1930, had autumnal hay fever (ragweed) since age of 8 years. For several years she has had an increasing number of winter colds, and not infrequently was confined to bed on account of the severity. Pollen injections of ragweed gave very satisfactory results. On return in April, 1931, she stated that for the first time in years she had had no colds, and was well all winter.

The reason for this apparent immunity to the infection known as the common cold is not now known. It is presented as a clinical fact that remains to be explained. It suggests, the tonic effect of

pollen therapy on the mucous membrane, resulting from the reaction between sensitized tissue and specific allergen, that renders it less vulnerable to the infecting virus. Another possible explanation is that the immunity against the pollen created by pollen injections confers a non-specific immunity against the infection.

Summary

(1) Two hundred hay fever patients who received pollen therapy were observed from 1 to 6 years.

(2) Fifty-three of this number stated that they were also subject to frequent colds.

(3) After a seasonal or perennial course of treatment 36 were relieved from their colds.

(4) The remaining 17 who were not relieved from their colds received very little benefit from their hay fever treatment.

17 PARK AVENUE

References

1. Gay, Leslie U.: Economic Results from the Treatment of Pollen Asthma and Hay Fever, *Journal of Allergy* 2:456, 1931.
2. Smiley: Pickett Thomson Laboratory, Paper, 8:381, 1932.
3. Cooke, R. A.: Personal communication.

CATCH THEM EARLY

It may surprise some to learn the high percentage of school children showing a positive reaction to tuberculin tests, as revealed by Dr. William P. Brown, heart and lungs specialist of the State Department of Education, Division of Health, in a series of letters to doctors urging annual examinations.

Dr. Brown stated that tuberculosis is the most serious threat to the health and life of the youth of the nation. He urged the tests for school children as an economy.

His letter included a table showing the result of tuberculin tests made recently on school children in several New York State counties and in the cities of Cleveland, and Detroit:

	Pupils Tested	Pupils Positive
Ulster County	4,951	979
Rockland County	6,239	3,144
Chautauqua County	40,855	8,193
Westchester County	9,751	4,388
Cleveland, Ohio	10,943	1,649
Detroit, Mich.	36,356	8,933

As a result of tests given college groups throughout the nation last year, 31,000 re-

acted positively out of a total of 72,450, and 459 were discovered to have active pulmonary tuberculosis.

Vienna has an American Medical Society. Its president, Dr. Douglas W. Owen, of South Bend, Ind., has been making this country a brief visit. He will soon return to Vienna, where he is studying. He says that some 300 professors of medical and surgical science are giving instruction in Vienna in English, thus eliminating one of the greatest drawbacks to medical study there, the inability of some to learn German.

A comprehensive knowledge of nutrition, including an understanding of the types of food best suited to an individual, is more important to the human race than the conquest of such diseases as leprosy, rickets and scurvy, according to Dr. Mary Swartz Rose, professor of nutrition at Teachers College, Columbia University.

Some surgeons now wear wooden shoes, with light rubber soles and heels, in the operating room.

THE VALUE OF A "CURE REGIME" IN THE TREATMENT OF CORONARY DISEASE

A Critical Study

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Over a period of years at various so-called cure resorts both here and abroad there has accumulated considerable evidence that a regime which comprised, among other things, the use of CO₂ baths was of benefit in the treatment of coronary disease. Considerable of this evidence has been worked out at Saratoga Springs during the past twenty years, but until recently the personnel was not such that anything approaching satisfactory studies could be made. This paper deals with observations made during the past season on 107 consecutive cases of unquestioned coronary disease and consists of statistical studies on physical examinations, electrocardiograms, teleroentgenograms, vital capacity tests made before and after a course of treatment. Routine laboratory procedures including urinalysis, blood examination, and Wassermann reaction were made at least once, where indicated blood chemistry was also done.

It is fully realized that results similar to those which follow have been accomplished in the various other institutions dealing with heart disease, but it is also interesting to note that in several instances symptomatic improvement at least has been effected among our patients when institutional or drug therapy had failed or had been comparatively ineffective. In most instances, however, our task has been to carry on after the period of hospitalization or rest had ended. All our patients were ambulatory.

In selecting patients for study only those were chosen who presented unquestionable historical and clinical evidence of coronary disease. In addition to a conclusive story of anginal pain it was decided to use only those showing some corroborative evidence in the physical examination, in the electrocardiogram, the teleroentgenogram or in any combination of the three. For instance it seemed justified in the presence of a typical story, to consider the following as satisfactory and presumptive evidence that such a condi-

tion existed: hypertension, palpable arteries, cardiac enlargement, significant changes in the electrocardiogram such as left axis deviation, flattened, diphasic or inverted I waves in lead one or two or both, slurring, widening, or low voltage of QRS complex, significant Q wave in lead three, bundle branch block or heart block of any degree, in the teleroentgenogram cardiac enlargement with or without evident sclerosis and widening of the aorta.

These patients undertook a regime which in its principal factors was identical although many changes in detail of diet, rest, exercise and in the temperature, duration, depth, and CO₂ concentration of the bath were made in the individual case. The average duration of treatment was 21 days. If being used, drug therapy was discontinued unless such discontinuance was specifically contraindicated. Except in the rather numerous instances of obesity and in a few diabetics no radical dietary changes were made. In the obese a careful attempt at weight reduction was instigated; some diets running as low as 460 calories with utilization of vitamins A, B, and D and mineral salts in conjunction. Agar agar was used for bulk. Mostly the diet sheet prescribed a simple well balanced ration with fluids of all kinds limited to two quarts. A minimum of 9 hours rest at night with one hour after the midday meal and a quiet period after the evening meal was routine. Exercise was carefully graded and highly individualized as much of necessity be the case and ranged from gentle massage to walks of considerable duration and of varying gradients.

Again, depending upon an estimate as accurate as was possible of the patients' myocardial reserve, baths were given every day for 3 days running, for two days, or every other day. Temperature ranged for the baths between 95° and 91° F and the duration from 5 to 10 minutes, again depending upon the estimated condition of the myocardium. The

baths were given as half, three-quarter, or full baths, i.e., the patient was immersed to the umbilicus, the nipple line or to the neck. The gas concentration was either half, three-quarter or full, full saturation being a supersaturation of approximately 135 per cent. Each patient was seen at each bath. The blood pressure and pulse rate were taken before and after the bath, following which there was a rest hour.

During the many visits which we made to patients there were incorporated frequent, brief, and quiet talks on the nature of coronary disease, how it came about, the necessity for a change in the manner of living, the desirability of a calm philosophy of life, the thought that many people suffering from the disease have returned to a useful life, though of necessity, one more restricted than formerly; that there is a definite life expectancy, and that, in the individual case, material improvement may be manifest. It was also brought out that warning signs as substernal pain and the like were fortunate since they were danger signals and were to be viewed only as such but were to be acted upon promptly. In a word the endeavor was made repeatedly to slow the patient's tempo of life, to teach him to live with his disease and to preserve and, if possible, increase the remnants of his optimism without neglecting the lessons of caution.

The group for this study consisted of 107 cases all of whom were treated in general by the routine just described. As has already been stated there were many modifications of the general plan in the individual case. Of this group 33 were females, 74 males, the latter being chiefly from executive and professional walks of life. Not a few were physicians. The average age was 61, the range being 40 to 80 years. The average duration of symptoms was 3 years, the limits being one month to 10 years. In 32 there was a definite history of coronary occlusion. Twenty-seven had a history of pre-existing high blood pressure, 8 of low pressure. The initial office examination showed 50 to have had a systolic pressure above 150, eight above 200, and but 2 below 110.

Classified according to the American Heart Association 44 were in Class IIA

(activity slightly limited) and 63 in Class IIB (activity greatly limited).

Parenthetically it is interesting to note that we are unable to confirm the observation of Levine and Eppinger upon the rarity of normal blood pressure in women with the anginal syndrome. In our series 9 had systolic pressure below 140, 17 below 150. This is based upon the average blood pressure determined as will be described shortly.

It is no new observation that blood pressure readings vary within wide limits in any given individual. This would seem to be especially true of the patient with coronary disease. The influence of psychic factors is strongly evidenced by the changes which took place as the patient settled into the routine of his "Cure."

Before beginning a régime each patient was subjected to a thorough physical examination together with all indicated laboratory procedures. The average of the initial blood pressure readings made at this time was 168-95. Subsequent readings were made before and after each bath, the average number of baths being 15. To allow for psychic factors an average was made of the findings at the fifth and seventh blood pressure readings taken after the second and third baths and again at the time of the last two baths. The figure arrived at was 140-81, a difference of 28 mm. of mercury in the systolic and 14 in the diastolic reading. These readings were made after a rest period to obviate the influence of any recent activity and demonstrate the frequent inaccuracy of the casual office blood pressure determination.

In several instances there was a wide variation between the pressure taken at the office at the time of the initial examination and the average pressure of the fifth and seventh readings as the following observations indicate:

	<i>Initial Pressure</i>	<i>Average</i>
Mr. B.....	210-120	152-90
Mrs. S.....	188-110	128-75
Mr. C.....	204-102	150-84
Mrs. H.....	196-102	150-71
Mrs. F.....	170-102	127-79

Studies made on vital capacity before and after the régime are far from impressive, though it must be kept in mind

that for the most part, none of these patients was suffering from congestive heart failure so that any improvement would be less likely to be manifest here. An average was struck for the group at the time of the initial examination and again upon the final examination usually the day following the last bath. The average of the first determination was 2,822 cc and of the last 2,777 cc.

Although the teleroentgenogram is open to some criticism as a means of heart measurement the determination of the cardiothoracic ratio on the seven foot film made in a standard manner was considered satisfactory for purposes of this study. The average CTR at the first examination was 0.48 and at the end 0.47. The measurements of the heart of the average patient suffering from coronary disease would seem definitely to fall within normal limits.

The study of the electrocardiogram presented rather more interesting and rewarding information. Of the 107 cases at the time of the initial examination but 6 had a normal tracing. 14 had left axis deviation only, leaving 87 with some positive electrocardiographic evidence of myocardial damage. The abnormalities were divided as follows:

Prolonged P-R interval (over .20 sec)	9
Significant Q wave in L3 or 2 and 3	17
Prolonged QRS (over 10)	8
Abnormal configuration of QRS (notching slurring widening)	37
Low voltage QRS (under 6 mm)	2
Significant T wave changes	
a Under 10 mm height (all leads)	
b Diphasic	
c Inverted	
T1 only	18
T1 & T2	12
T123	18
T2 or T2 & T3	8

Forty five cases showed left axis deviation combined with other electrocardiographic change.

One hundred two of the tracings had normal sinus rhythm. Five showed fibrillation of the auricles. 4 bundle branch block equally divided between right and left. First degree heart block occurred 9 times. Premature contractions occurred very frequently.

The really high point in this work came with the tabulation of results found in the electrocardiogram taken following the regime. We hoped that here might be visibly demonstrated an improvement which would correspond in some degree

with the subjective picture. A moderate disappointment was in store for but 26 cases showed both electrocardiographic and clinical improvement. Seventy showed clinical improvement but no electrocardiographic change and eleven no change either clinically or in the electrocardiogram.

T wave improvement, while in no instance striking, was definite in 22 instances and was divided as follows:

T1 only	F1 & T2	F123	F2 or T2 & T3
7	8	2	5

The P R interval was appreciably altered in 15 instances, in one case changing from 23 seconds to 16. A prolongation of a brief P R interval from 13 or 14 to 15 or 16 seconds was noted several times. The QRS complex was not significantly changed in any instance.

Symptomatic Change According to Age Groups

Age group	No cases	Im prov	Marked Non	
40-50	11	10	0	1
50-60	41	32	5	4
60-70	34	22	8	4
70-80	18	16	0	2
80-	3	3	0	0
	107	83	13	11

Quite expectedly the largest group of cases falls within the 50 to 70 decades (70 per cent). This group shows also a high percentage of improvement and contains all those patients who evidenced marked amelioration of symptoms.

An analysis of the 11 cases showing no improvement is of interest. Two did not complete the regime and were women of the emotionally unstable type. Three had advanced myocardial damage. One, a woman of 45, had suffered from malignant hypertension for 3 years, one was senile and in addition had rheumatoid arthritis, one luetic cirrhosis of the liver, one had been having several anginal attacks daily for a year, was of an irascible temperament and rather non cooperative. Two reported improvement after returning home. As a group they would seem to constitute failures under any form of therapy.

Eighty three of the 107 showed some material improvement. Increase in exercise tolerance and diminution in the number and degree of anginal attacks were criteria assumed. How big a factor in these results may have been the care

fully cultivated swing toward optimism is open to speculation. The item of apprehension is a large one in the life of these patients and the pain "habit" a difficult thing to break down, the building up of a calm and detached outlook toward the occurrences of daily life appeals to us as of much importance and a sense of humor is perhaps of far greater value than much therapy. To teach the patient to live with his disease and within his capacities is far from an unimportant part of the régime.

Thirteen cases were benefitted sufficiently to be classified as showing marked improvements. A brief résumé of a few case histories is perhaps permissible.

CASE A. A physician, age 71 with a large and active practice, has always been robust and strenuous. He was first seen in 1933, at which time he gave a history of increasing fatigability over a period of three years with slight swelling of his ankles for the past year. Also for the past year he had experienced substernal pressure on exertion and following emotional strain. Associated with this was a burning sensation in his wrists which he described as "hot bracelets." Symptoms were relieved by nitroglycerine. Recently symptoms had become so frequent that he was unable to walk more than one hundred yards without producing discomfort in his wrists. Physical examination showed his heart moderately

enlarged to the left and some sclerosis of his retinal and peripheral vessels. Electrocardiogram showed moderate myocardial changes. At the end of one month which included a course of 20 baths he was able to walk 6 miles daily without symptoms. He returned for another month in the spring of 1934 and for shorter periods in the fall of the year. He has continued to work strenuously with no other vacations and has had but very few attacks of discomfort and these of a mild nature. There has been no progress in his disease from the standpoint of the electrocardiogram.

CASE B. A superintendent of railway mails, 58 years old, had always enjoyed good health until 4 years ago. Since this time he is said to have had systolic blood pressure of over 200, although he has suffered no subjective symptoms. For the past month he had been having severe attacks of substernal pressure with pain radiating to the back of his neck and right arm coming on following the least exertion and on one occasion was awakened from sleep by it. He had been forced to stop work and had been experiencing one severe attack per day while resting at home. Electrocardiogram showed low voltage wave in T1 and T2, T3 inverted with a deep S3 and slurring of the QRS segment in lead 2. At the end of the month he was able to walk three-quarters of a mile in zero weather without symptoms. At this time lead 1 had become normal and the inverted T3 had become isoelectric.

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Discussion

DR. FRANZ M. GROEDEL, *New York City*.—Every physician who has had occasion to send patients suffering from so-called coronary diseases to cure resorts, and especially those physicians who have watched these patients while they were taking a cure, will agree with Dr. Comstock's very interesting report. But this is the first time that we have had a report on such a large number of patients showing symptoms of angina pectoris who have been so closely observed and scientifically watched during the cure.

We will not be astonished by the good results of the Spa treatment and, of course, especially the CO₂ baths in such cases if we consider that angina pectoris is nothing else except a symptom of heart failure, may it be caused by an organic vascular disease or by a functional or spastic alteration. In other words, angina pectoris is a signal which indicates that the heart muscle cannot fulfill its duty and the cause of this is a disturbance of the nutrition of the heart muscle. On the other hand we will understand the great influence of the CO₂ bath treatment in such cases if we consider all the facts which have so far been experimentally substantiated, such as changes of the basal metabolism, of the Ekg., pulse rate and quality, and, first of all, changes of the minute volume of the heart. We cannot explain the meaning of all these facts better than by saying that the CO₂ bath acts like digitalis on the circulatory tract.

There are only a few points which I missed in Dr. Comstock's lecture about the symptoms of coronary diseases; first of all, it seems that most of the cases Dr. Comstock saw had a damage of the left heart. In cases where the damage is situated in the right side we often find the type of congested heart failure. Further, there are many cases in which we do not see hypertension but hypotension, and this may be especially true in particularly serious cases. In the same patients, we often note a distinct bradycardia and an alarming

weakness of the heart sounds. I hope that Dr. Comstock and his collaborators will add a few reports about the changes of the pulse, pulse quality and especially the heart sounds and their characterization during the cure. This would be very interesting because, in my experience, as a result of the Spa treatment, the pulse becomes distinctly regulated, whether it was a case of brady- or tachycardia before the treatment, and first of all, the quality of the heart sounds is greatly improved. Even the very alarming symptom of diastolic gallop rhythm may disappear in the course of such a cure, as I reported and proved by tracings of the heart sounds.

When I mentioned before that the CO₂ bath treatment can roughly be compared to digitalis, I think I gave the physiological explanation of how the CO₂ baths can act in cases of coronary disease, or better, of disturbances of the nutrition of the heart muscle. *Rein* has shown that the coronary blood flow depends on the heart's work. Augmentation of the work of the heart does not diminish the blood flow through the coronaries as we formerly believed, but increases it, as *Hochrein* and *Rein* have shown, and the systolic contraction of the heart does not decrease the coronary blood flow as we formerly thought; on the contrary, there is even a maximum of circulation at this moment. Therefore, *Rein* warned against judging the coronary function only from the standpoint of the vascular lumen and recommended the application not only of vascular dilators but also remedies which diminish the pulse frequency and increase the output of the heart.

I am sure that if Dr. Comstock will start the experimental work he mentions, he will find—as we did in the Kerckhoff Heart Research Institute in Bad Nauheim—that the effect of the CO₂ bath in coronary disease is similar to that of digitalis.

INSULIN IN THE MALNUTRITION OF NONDIABETIC CHILDREN

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Service of Dr Jerome S. Leopold*

The use of insulin to stimulate appetite in nondiabetics and thus produce a gain in weight has found favor with numerous observers. The first report was made by Pittfield¹ who found one unit a day helpful in treating two infants who had failed to gain weight. Falta² and other European clinicians gave much larger doses in adults over a long period of time with splendid results. In this country Barker,³ Metz,⁴ Margolies,⁵ Nichol,⁶ Nahum and Himmwich,⁷ Bogner,⁸ and Allen and Edlin⁹ report uniformly good results in adults, with and without disease syndromes.

Following Pittfield's report, insulin was employed in several clinics for the treatment of marasmus and intestinal intoxication in infants, with the hope that here was a therapeutic measure that would materially reduce the high mortality of this disease. Doses of from 5 to 10 units were given one to three times daily, buffered with injections of glucose solution. Although some observers were at first enthusiastic, the results failed to meet the early expectations and this use of insulin fell into disrepute amongst pediatricians. However, Barbour¹⁰ in 1924, reported favorable results in 38 out of 40 children, from 3 to 10 years of age, suffering from various ailments, all of whom were hospitalized while under observation. Rodwin and Brown¹¹ in a more recent article failed to obtain any appreciable gain in weight in 10 children in a Brooklyn orphanage, who received treatment from 4 to 7 weeks. Higgons and Ostlund¹² in a study of 41 children in a convalescent home found insulin therapy of real value in speeding up the rate of gain of undernourished children who did not respond satisfactorily to the usual hygienic and dietary treatment. Insulin had little if any effect upon the weight curve of children who were already gaining at a satisfactory rate.

In an endeavor to determine whether this form of therapy was as effective in malnourished children—some of whom had been unable to gain in spite of pro-

tracted therapy with the usual form of tonics, sun lamps and diets—as in the adults reported, a group of children were selected for study, some well, except for a condition of severe malnutrition and some who, although recovering from an acute infection, were and had always been considered underweight. These children were hospitalized and, after a preliminary blood sugar estimation, were given injections of insulin 20 minutes before meals, either two or three times daily. It was found that 5 units three times daily was usually a large enough dose to produce results. The appetite increased tremendously immediately after the start of the injections and these children had no difficulty in consuming a diet of from 2,500 to 3,000 calories. When one considers that the ordinary hospital diet is about 1,800 calories, one can appreciate how much more food these children consumed. Whenever their appetites seemed to fail the dose of insulin was increased with an accompanying increase in the desire for food. It was amazing to see a young child eat with gusto a meal an adult would find difficulty in completely consuming. A sample menu follows. In addition to this, bread and butter with milk was given between meals.

BREAKFAST

Orange juice	Butter
Farm's with milk	Scrambled eggs
Roll	Light cream (20%)

DINNER

Tomato juice	Butter
Roast lamb	Pineapple cake with
Mashed potatoes	whipped cream
String beans	Milk
Bread	

SUPPER

Eggs Windsor	Butter
Spinach with diced	Cornstarch pudding
bacon	Fruit with whipped
Tomato salad with	cream
mayonnaise	Milk
Whole wheat bread	

One cannot expect this gain to be permanent. In some cases the prodigious appetite continued for months after the cessation of therapy, with a continuance

of the gain in weight. In others there was a loss in weight from the point reached on cessation of treatment but never below that when treatment was instituted. Not only was there a gain in weight but there was also a marked improvement in body tone and the general well-being of the patients. Several of them had minor illnesses during the period of observation after leaving the hospital. During these illnesses their appetites were poor but returned again on recovery.

Blood sugars were within normal limits.

Twenty-seven children were observed and only three failed to respond, even though given as much as 15 units three times daily. No untoward reactions occurred although, occasionally, there was a slight giddiness or nausea following the injections. When this took place, no further injections were given that day. As a control, a diet of 2,500 calories was given to several children for 10 days, but they found it impossible to eat it all. With the institution of insulin therapy they became very hungry and had no difficulty in eating everything on their trays.

The accompanying chart best illustrates our findings.

Summary

(1) Twenty-four patients gained from $3\frac{1}{2}$ to 15 pounds after varying periods of treatment at a rate ranging from about 1 to 3 pounds per week and at an average of 1.6 pounds per week.

(2) Three out of 27 patients treated failed to make a satisfactory gain. One gained $\frac{1}{2}$ pound in five weeks, one gained $2\frac{1}{4}$ pounds in four weeks, and one gained $2\frac{1}{4}$ pounds in four and a half weeks.

(3) One of the 3 who failed to do well gained 6 pounds 6 months after cessation of treatment.

(4) Of the 24 patients who gained weight on treatment, 13, after one month, had lost an average of 1.4 pounds (the minimum loss was $\frac{1}{4}$ pound and the maximum $3\frac{1}{2}$ pounds); 7 had gained an average of 2.6 pounds (the minimum gain was 1 pound and the maximum $4\frac{1}{4}$ pounds); and four failed to return.

(5) At the end of 3 months 11 had lost an average of 3.4 pounds (the minimum loss was $1\frac{1}{4}$ pounds and the

CHART

Name	Sex	Age	Diagnosis	Admission		Normal Wt.	Weight at start	Weight at finish	Duration of treatment	Gain	1 Month later	3 Months later	6 Months later
				Wt.	Ht.								
1* Cang.	M.	3	Malnutrition	33	41	37	33	33½	5 weeks	½	In tuberculosis sanatorium with active lesion.		
2 Corsari	F.	3	Bronchial pneumonia	28½	37	32	26½	33½	5 weeks	6½		32	30½
3 M. G.	M.	5	Tuberculosis Malnutrition	35½	45½	46	31½	38	16 days	3½			
4 J. C.	M.	5	Acute pharyngitis	30	39½	35	30½	34	4½ weeks	3½	33	32½	33
5* H. K.	F.	7	Malnutrition	42½	48	52	42½	44½	4 weeks	2½			
6* R. F.	M.	7	Anorexia	41½	48	53	41½	43½	4½ weeks	2½			49
7 Burgess	F.	7	Malnutrition	47	49½	57	47	54	5 weeks	7		51	51½
8 C. K.	F.	7	Malnutrition	39½	48	52	40½	44½	3½ weeks	4½			
9 J. E.	M.	8	Malnutrition	45½	49	55	46	53	3½ weeks	7½	54		
10 J. P.	M.	8	Lobar pneumonia	52	51	61	52	58½	5½ weeks	6½	57½		58
11 A. M.	M.	8	Malnutrition	41½	49	55	42½	51½	9 weeks	9	49	48	
12 A. F.	F.	8	Malnutrition	46½	49	55	45	50	6 weeks	5	54	55	
13 E. C.	F.	9	Malnutrition	40	45½	48	42½	47	4 weeks	4½	48	44½	44½
14 H.	M.	9	Malnutrition	49½	49½	58	48½	53	6½ weeks	4½	51½		
15 M. O. F.	M.	10	Malnutrition	63	55½	73	61½	69½	6 weeks	8½	74	74	74
16 R. H.	M.	10	Right pleural eff.	43½	47½	51	44½	51½	4½ weeks	7	49½	45	
17 K. K.	M.	11	Malnutrition	71	58	83	68	75½	7 weeks	7½	78½	79½	82
18 H.	F.	11	Malnutrition	63½	53½	70	63	70	7 weeks	7	69½		
19 F. U. S.	F.	11	Malnutrition	72	57½	82	71½	79½	19 days	8½	78½	75	80
			Incipient T. B.										
20 A. G.	F.	11	Malnutrition	72½	61	100	74	86	6 weeks	12	82½		
21 H. W.	F.	11	Malnutrition	70½	57½	83	70½	79	5 weeks	8½	78½	75½	
22 M. A. Y.	M.	12	Bronchial pneumonia	75½	59½	90	75½	90½	6½ weeks	15	90	91½	91½
23 K. E. N.	F.	12	Malnutrition	53	53	69	52½	58	4 weeks	5½	57½	56	56½
24 R. R.	M.	12	Malnutrition	70	58	85	67½	77½	6½ weeks	9½			
25 G. E.	M.	12	Malnutrition	72½	59½	90	72½	83½	5 weeks	11	86½	81	80½
26 H. L.	F.	13	Malnutrition	63½	58	88	63½	74	7½ weeks	10½	76	76	74½
27 H. B.	F.	14	Malnutrition	69½	59	96	69½	78	5½ weeks	8½	75	72	89

* These patients showed no appreciable improvement.

maximum $6\frac{1}{4}$ pounds), 5 had gained an average of 3.25 pounds (the minimum gain was $1\frac{1}{4}$ pounds and the maximum 5 pounds), and 8 failed to return.

(6) At the end of 6 months 11 failed to return. Six showed an average gain of 4 pounds with a minimum of $\frac{1}{2}$ pound and a maximum of 11 pounds. Seven

showed a loss ranging from $1\frac{1}{2}$ to $3\frac{1}{4}$ pounds with an average loss of 1.8 pounds.

Conclusion

Insulin is a valuable aid in producing a gain in weight in the malnutrition of nondiabetic children.

1085 PARK AVENUE

References

1 Pittfield, R. L. On the Use of Insulin in Infantile Inanition. *NEW YORK STATE JOURNAL OF MEDICINE* 118:217, 1923.

2 Falta, W. Über Mastkuren mit Insulin und Insulore Feltsucht, *Wien Klin Wochenschr* 38:757, 1925.

3 Barker, L. Pulmonary Tuberculosis and Profound Undernutrition with Comments Upon the Insulin Fattening Cure, *Inter Clin* 3:19, 1931.

4 Metz, Roy D. Insulin in Malnutrition. *JAMA* 96:1456, 1931.

5 Margolis, Jacob I. Insulin and Nonspecific Therapy, A Common Mechanism, *Jour Nerv & Ment Dis* 74:278, 1931.

6 Nichol, E. S. Insulin Fattening. Late Results in 63 Cases, *South Med Jour* 25:405, 1932.

7 Nahum, L. H., and Hunwich, H. E. Insulin and Appetite. Method for Increasing Weight in Thin Patients, *Am J M Sc* 183:608, 1932.

8 Blotner, H. Observations on the Effect of Insulin in Thin Persons, *JAMA* 100:88, 1933.

9 Allen, I., and Edlin, J. Personal Communication.

10 Barbour, O. The Use of Insulin in Undernourished Nondiabetic Children. *Arch Ped* 41:707, 1924.

11 Radwin, Leo S., and Brown, Samuel S. Insulin in Undernourished Nondiabetic Children. *Jour of Ped* 4:315, 1934.

12 Higgons, R. A., and Ostlund, E. O. Insulin Its Use in Nondiabetic Children, *Jour of Ped* 5:495, 1934.

ABATING ATMOSPHERIC POLLUTION

Because they carried the advertising of a medical preparation which other agencies of the Federal government consider improper for use, 21 broadcasting stations must appear at a hearing of the Federal Communications Commission, October 3, and show cause why their licenses should not be revoked for failure to operate in the public interest, according to a report in the *A. M. A. Journal*. This action is part of the campaign against radio advertising which has just been launched by the Federal Communications Commission, newspapers announced May 23. In response to questions by broadcasters and advertisers, most of which concerned medical products, the Commission stated:

"This question is one which essentially does not concern the Commission as the sole responsibility of operating its station in the public interest and according to law is upon the station licensee. If a station licensee is not prudent and intelligent enough to find its sources of information to properly guide it then it is not properly qualified to operate a station in the public interest and according to law."

Station licenses are granted for only six months, and on every application for renewal the Commission determines whether or not the station is operating in the public

interest. While the Commission is concentrating now on drug preparations which it considers improper, it probably will extend the drive to other types of programs which it believes "not in the public interest." The 21 stations cited are all charged with advertising a reducing preparation which the Food and Drug Administration, Federal Trade Commission, and Post Office Department have condemned and tried to put out of business but which in one way or another, has evaded other Federal laws.

Danger, rather than life, begins at forty, according to Dr. John L. Rice, Commissioner of Health who has just issued a brochure of health hints for men entering middle age. Contrary to general belief, Dr. Rice finds, men become the weaker sex after that age, the death rate among men and women showing a marked difference on passing the forty year mark.

Cod liver oil has fallen from its high estate as an antirachitic. Many other fish oils, notably mackerel, tuna, sea-bass, and swordfish have from a hundred to one hundred and forty times more of these vitamins than cod liver oil according to Dr. Charles E. Bills in a paper given before the American Society of Biological Chemists.

LOW BACK PAIN IN WOMEN

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The pathogenesis of low back pain has assumed renewed importance as a result of the development of special radiological technic, more careful clinical studies, and accurate observation on anatomical material. Though the complaint is specific in nature, the variety of etiological agents involved can very easily embrace every specialized field of medical science. This paper represents an analysis of 63 selected cases of women who presented themselves to our gynecologic clinic with the specific major complaint of pain in the back.

These 63 cases represent a group of women from an average gynecologic service of at least 600 examinations over a period of 6 months. The cases were included in this special study when their first complaint was backache. They were divided into four general groups: (1) gynecologic, (2) surgical (orthopedic), (3) genitourinary, and (4) medical.

		Percentage
Gynecologic.....	11	17
Surgical	43	68
Genito-urinary	4	6
Medical	5	7
Total number.....	63	

It is interesting to note that only 11 cases were definitely proven gynecologic cases; i.e., x-ray of the back, and urinalysis were negative. The only positive evidence being the existence of gynecologic pathology of a definite nature which was proven at the operating table and from which relief was obtained by surgical or conservative treatment. Nine of these cases presented tumor masses, either in the uterus or as cystic enlargements of the ovary. The backache was of a generalized type with no specific localization. In four of the cases radiation of pain was

noted to the middle of the thigh and lower abdomen. This we ascribed to pressure against the ilioinguinal and iliohypogastric nerves. No cystoceles or rectoceles were found in this group.

The majority of cases fell into a group which we classified as surgical. These patients showed no relationship between the backache and pelvic or abdominal pathology. After having demonstrated the absence of such pathology, the patient was put through a series of movements such as forward bending, side bending, and so on, with a careful palpation of the lumbosacral, and sacroiliac areas for identification of the involved area. Twenty-two cases were definitely of a traumatic nature with onset of symptoms after pregnancy. All these patients had received a general anesthetic while in the lithotomy position and first suffered the backache upon discharge from the hospital. These cases are in reality untreated traumatic backaches, caused by undue pressure against the sacral joints either at the iliac or the lumbar sites. The recent work of Ghormley on low back pain identifies the articular facets of the vertebrae as the site of actual pathology. This seems to be a very reasonable explanation in the light of his latest work.

Five cases were classified as backaches due to muscle spasm (sacrospinalis, latissimus dorsi). This condition was recognized usually by tenderness of the entire muscle with pain localized to the site of insertion of the muscle. Hauser believes that this is a frequent cause of low back pain calling particular attention to the condition as due to a functional muscular insufficiency. The other 17 cases consisted of osteoarthritic changes in either the lumbosacral or sacroiliac joint. Undoubtedly in this group were several cases of spondylolisthesis. Referred pain with sciatic symptoms existed in 18 cases. Thirty-eight cases had localized lower back pain confined over the site of one or both articulations. In 5 cases the pain was generalized over the entire lower back. It is to be noted again that all these patients had sought relief of gynecologic disease.

Gynecologic cases, 11		
Nulliparous, 3; parous, 8		
		Percentage
Uterine tumors.....	5	45
Ovarium cysts.....	4	36
Inflammatory	3	27

	Percentage	
Traumatic after pregnancy	22	49
Muscle spasm	5	11
Arthritic (other causes)	16	37
Total surgical cases	43	

Character of Pain

	Percentage	
Generalized over back	5	9
Generalized with radiation	2	4
Localized	38	88
Localized with radiation (Sciatic pain)	18	41

Smith Peterson Classification

Site of Pain	The region of the inferior sacroiliac ligament and the greater sacroiliac notch
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		Per centage
Subjective areas of radiation	Posterior aspect of thigh	89
	Posterior aspect of leg	81
	Along superior gluteal nerves	23
	Lower mesial aspect of thigh	12

Two interesting cases are taken from the above group. The first case is that of a young woman who complained bitterly of severe backache. There was no history of trauma. She dated the backache to the time of the birth of her first child. The patient was positive that her pain was due to "woman's trouble." Careful gynecologic examination failed to reveal any pathology to account for pain. X-ray of back showed a "herniation of all the intervertebral discs." She was referred back to the surgical clinic where treatment was instituted.

The second case is that of a middle-aged woman who complained of severe backache and was treated for years in various medical clinics for arthritis of the spine. She was referred to the gynecologic clinic for check-up of genital pathology. Pathological findings were insufficient to account for the severity of the complaint. X-ray showed a "compressed fracture of the fourth and fifth lumbar vertebrae."

Four cases were found to have pathology confined to the urinary tract. The

backache in these cases was always generalized and on pressure over the articular regions no additional response was elicited. These patients had no localizing symptoms on pelvic or spinal motion. The five medical cases have evidence of generalized arthritic changes. All of these women were over 45 years of age.

Intra-abdominal or pelvic pathology can cause backache, the qualities of which are essentially different from the characteristics of backache caused by bony or articular pathology. The latter type of pathology whether it is facet syndrome, fourth or fifth lumbar subluxation, or sacroiliac or sacrolumbar, is always definitely localized to the area involved. The radiation appears to be mainly along the posterior aspect of the thigh or leg and is therefore caused by pressure on the sacral nerves. In the gynecologic backache the referred pain is usually anterior and seems to be due to pressure on the iliohypogastric, ilioinguinal, or femoral nerves. The backache is usually spread over the entire surface area of the back. It is as Novack claims "less precisely localized than most other pains." Rubin states that "Mathes has gone so far as to deny any significance to backache as a genital symptom."

X-rays of the back, especially lateral views and the oblique view technic of Ghormley are of value in the recognition of pathology of the skeleton of the back. Restudy of many cases in the gynecologic and other clinics will provide a new basis for therapy where other treatment has failed.

Summary

1 Sixty-three cases of backache from a gynecologic service are studied.

2 The majority of cases were proved to be of a surgical character with a considerable number ascribable to the trauma received during parturition.

3 Surgical backache and gynecologic backache have definite characteristic differences.

2902 WEST 30TH STREET

References

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|------------------|--|---|
| Hauser, F. D. W. | Low Back Pain, <i>Surg Gynec & Obst</i> 57 380, 1933 | 101 1773, 1933 |
| Meyerding, H. W. | Spondylolisthesis, <i>Surg Gynec & Obst</i> 54 371, 1932 | Jepson, P. N. Traumatic Backache, <i>J.A.M.A.</i> 101 1778, 1933 |
| Ghormley, R. K. | Low Back Pain, <i>J.A.M.A.</i> | Willis, T. A. Sacroiliac Arthritis, <i>Surg Gynec & Obst</i> 57 147, 1933 |

ACUTE SUPPURATION OF THE MEDIASTINUM

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Acute suppuration of the mediastinum is very infrequently seen. If tuberculosis, syphilis, and accidental wounds resulting in infection of the mediastinum are eliminated, it will be found that the more chronic affections in this location, such as aneurysm, Hodgkin's disease, benign and malignant tumors make up the greater portion of the reading matter on this subject. Of course, infection in the mediastinum as a sequel to surgical procedure in the neck does occur, but not frequently.

Acute abscess of the mediastinum has been reported in the literature surprisingly few times in the last twenty years. (No large series of cases has been described or analyzed.) A large percentage of the few reported cases has been in children, and these from the standpoint of x-ray diagnosis alone.

Influenza, pneumonia, measles, acute osteomyelitis of the fifth dorsal vertebra, perforation of an esophageal ulcer, lung abscess, and intubation have been given as etiological factors in the production of acute abscess of the mediastinum.

The present case, which may be added to the very small list of recorded abscesses of the mediastinum, was a pupil nurse, who came under observation on May 12, 1930. Her past history seemed unimportant. There was no serious illness. A myringotomy, a tonsillectomy, and an appendectomy for acute appendicitis were the outstanding features in her history. She had always enjoyed good health and was athletic. It was revealed that her illness was initiated with headache, generalized pain, fever, and a visible inflammation of the upper respiratory tract with redness of the pharynx, and a slight discomfort on swallowing. She improved under routine treatment so that four days after onset she felt perfectly well and expected to sit up the next day. On the fifth day of her illness, however, she felt much worse, complaining of severe headache, with return of pain on swallowing, which seemed to come from a soreness in the neighborhood of the thyroid gland, rather than from the tonsillar area or the pharynx. Nose and throat examination was negative. Sinuses were negative



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

Lingual tonsils were not inflamed. Larynx showed no inflammatory reaction. The rate of respiration and pulse increased. The temperature rose rather abruptly. A hacking cough appeared which was not productive. The physical examination of the chest was negative, although she looked and acted like a patient with early pneumonitis. X-ray of the chest revealed no areas of consolidation in the lung, but

there was a slight widening of the upper mediastinal shadow to the right. The temperature chart and the record of symptoms, physical signs, and laboratory findings are self-explanatory. (See Charts I and II.) The very complete series of x-ray photographs trace the extent of the pathology in the chest. The definiteness of the mediastinal shadow, its increase in size and density, and its rapid

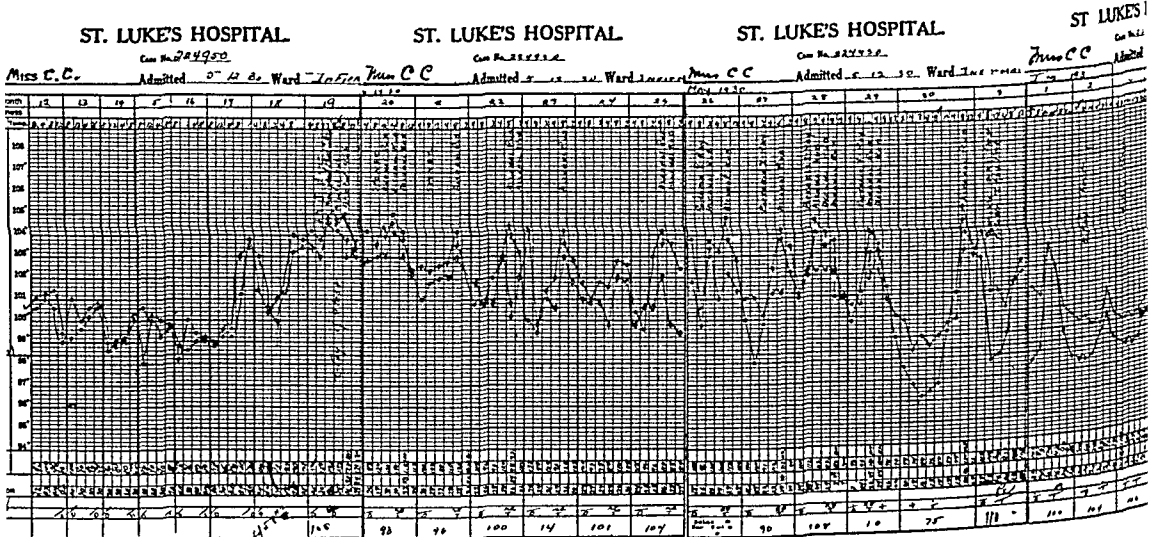


Fig 7



Fig 8

CHART I



decrease in density with the emptying of the abscess, showing a definite fluid level with a concomitant increase of pulmonitis which in turn is sharply defined as involving only the upper lobe of the right lung, are very clearly shown. The latter part of the series shows a clearing of the process in the lung, the last photograph showing a complete return to normal.

During her period of extreme illness and for some time after, there was a

swollen, tender thyroid gland, a definite nonsuppurative thyroiditis which slowly receded.

Another feature of this clinical picture was the existence of a "left" cervical adenitis. The inflammation never reached the stage of suppuration but during the acute illness and for some time following, a definite palpable and auscultatory crepitus could be demonstrated. The patient also felt a "click" in the left side of neck.

CHART II

Date	Symptoms	Signs	Laboratory reports				
1930							
May 12	Cough — headache — generalized pain — fever		W	B	C	Polys	Lymphos
13	Throat sore — cough — generalized pains — fever						
15	Headache — pain in ear	Ear negative					
17	Cervical adenitis (left) Nausea — vomiting Thyroid enlarged, hard and tender	Sinus examination negative Chest negative					
18	Same symptoms	Chest negative					
19	Severe pain in upper right chest worse on breathing or movement but constant Headache increased Vomited Abdomen showed generalized tenderness Cough — little sputum Nose, throat larynx negative	Cyanotic Pulse increased Dullness at upper right chest No râles — no evidence of pneumonitis	23	000		92	8
			Blood culture negative				
			Sputum — Pneumococcus Group IV				
			W	B	C	Polys	Lymphos
20	Same symptoms	Few râles in right upper chest	24	000		92	8
21	Feels like choking Vomited Cough productive		23	000		86	14
22	Same symptoms — looks sicker	Positive D Espine sign	27	000		90	10
23	Quite exhausted Neck quite painful Glands more swollen	Attacks of rapid pulse with difficult breathing	33	000		96	4
24	Cough — chilly — drowsy Looks sicker	Some difficulty on swallowing					
26	Same						
27	Same	Cyanotic Looks very sick Breathing quite labored at times	34	000		88	12
28	Pain in back Difficulty in swallowing and in breathing	Signs of pneumonitis in right upper lobe Temp 100° to 104° and 105°					
29	Coughed up large amount of pus and mucus — helped by postural drainage Profuse sweats	More signs in upper right chest Temp 105° to 96° Gradual fall later					
30	Better today Still coughing up pus and mucus Clicking sound in neck on coughing	Signs of resolution in upper right chest					
31	Better More drainage						
June 1	Better Cough productive Grew better each day Symptoms less marked						
4		Right chest clear to physical examination	15	800		84	16
6		..	11	500		70	30



Fig. 9



Fig. 10

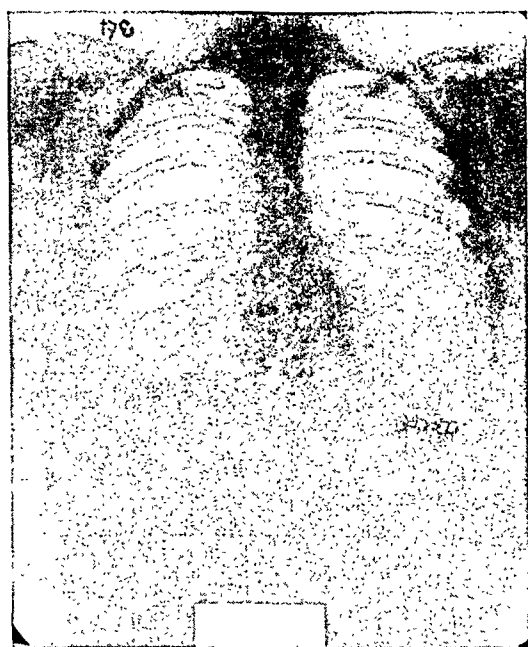


Fig. 11

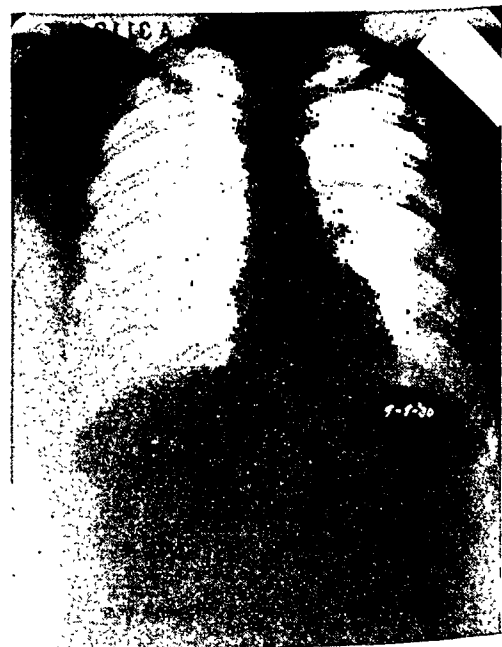


Fig. 12

on coughing. There is an x-ray photograph showing air in the tissues in this location.

The patient today is perfectly well and carries her responsibilities as a nurse with ease and comfort. She was able to take quite strenuous exercise during the latter part of the summer.

Comment

It seems as though an infection which involved the upper respiratory mucous membrane was drained by the cervical lymph glands. The infection also involved the thyroid gland. It later involved the tracheobronchial glands which in turn suppurated with abscess formation in the upper mediastinum. This abscess increased in size, giving the symptoms of acute infection with pressure. The abscess ruptured into a bronchus and was drained in this manner fifteen days after diagnosis was made. During the process of drainage the lung through which the pus passed became involved in an acute pneumonitis which later resolved. The additional factor of subcutaneous emphysema in the side of the neck opposite to the mediastinal abscess may be explained by air entering the abscess cavity and following a fascial plane upward to this unusual destination.



Fig. 13

This sequence of events as far as is known, has not been reported. We were dealing with a case of extreme illness and feel fortunate that our best ally, Nature, was allowed to work a restoration of this patient to health.

33 EAST 68TH STREET

PROTEIN THERAPY FOR BACILLUS DUCREY INFECTIONS

DAVID O. GORLIN, M.D., *New York City*

Chancroids or *Bacillus Ducrey* infections frequently offer to the physician a perplexing problem that far outweighs their true clinical importance. A speedy clearing up of the lesions has been the goal of the physician and the often vain hope of the patient. Besides, old therapeutic measures, as cauterization of the lesions or local application of antiseptic chemicals, would almost always leave the tell tale evidence of scars, necessitating a lifetime of explanations and excuses on the part of the patient.

A series of 42 cases of chancroid infections were investigated by the author, with a view to determining the efficacy of protein therapy. All the patients in this series were males who ranged between the ages of 19 and 46 years. Aside from their venereal infection all were in

good general health. No cases in this series were complicated by syphilis or diabetes.

The form of foreign protein most frequently used was "Dmelcos vaccine," a French stock preparation of *Bacilli Ducrey* in physiological salt solution, 225 million per c.c. The Dmelcos vaccine was administered intravenously, every second day, until complete cure was effected. It was given in the following doses:

First injection	1 cc
Second injection	1½ cc
Third injection	2 cc
Fourth injection	2½ cc
Fifth etc etc	3 cc

Usually 6 injections sufficed to effect a cure. The smallest number sufficient to heal the lesions was 3, given over a

period of 6 days. The greatest number of injections necessary was 8, over a period of 16 days. This time included the epithelization of the chancroids. One case, complicated by lymphogranuloma inguinale, failed completely to respond to treatment and healed apparently spontaneously in 8 weeks. Of the 42 cases investigated 22 were treated with Dmelcos vaccine.

Twelve cases were treated with gonococcus vaccine intravenously. The vaccine used was that of the New York City Board of Health, containing one billion organisms per c.c. Gonococcus vaccine was administered every other day, in the following doses, until complete cure and epithelization were effected.

First injection	1/2 c.c.
Second injection	1 c.c.
Third injection	1 1/2 c.c.
Fourth injection	2 c.c.
Fifth, etc., etc.....	3 c.c.

The smallest number of injections of gonococcus vaccine necessary to clear up the pathology was 5, over a period of 10 days; 9 was the greatest number of injections—over a period of 18 days.

Two cases were treated with New York City Board of Health stock staphylococcus vaccine, with the same doses and time intervals as employed with gonococcus vaccine. Of these cases, one healed with 6 injections in 12 days, the other with 7 injections in 14 days.

Six cases were treated with no systemic therapy whatsoever. Treatment in these cases was confined to daily washing of the lesions with 60 per cent alcohol and dusting with an antiseptic powder. Of these 6 cases, the quickest cure was effected in 27, the longest in 63 days, the average being 51. No cases were cauterized.

In the cases treated with intravenous

vaccine therapy, all injections were given in the evening, and the patient put to bed immediately. A chill and hyperpyrexia would ensue, lasting about two hours, after which the patient would be able to sleep soundly until time for rising in the morning. The only untoward effects were headaches in the morning (relieved by aspirin) and slight loss of weight immediately regained on cessation of treatment. No days were lost from work, in any case, this being a decided economic advantage to the patient.

Eleven cases were complicated by acute inguinal adenitis. All responded equally well to the protein therapy, and in no case was there need for recourse to surgery, even in those cases fluctuating.

The amount of scarring in all cases was practically negligible. In no cases was there any degree of skin deformity resulting, the lesions filling in with scar tissue, and epithelizing from the edges.

Conclusions

1. Intravenous vaccine therapy is an effective and rapid cure for bacillus Ducrey infections.

2. The action of the vaccine is that of a "nonspecific protein therapy."

3. Dmelcos vaccine, made of Ducrey bacillus, was more rapid in its therapeutic action than the gonococcus or staphylococcus vaccine.

4. Intravenous therapy is harmless in patients whose general physical condition is good.

5. Intravenous therapy is effective in the complications of Ducrey infections, as inguinal adenitis.

6. Intravenous protein therapy heals the malady, with a minimum of scarring and deformity.

923 WALTON AVENUE

BOUQUET FOR THE HEALTH HUNTERS

The Health Hunters Series of weekly health broadcasts sponsored by the State Department of Health has been chosen by the Social Work Publicity Council, through its Awards Committee, as one of ten distinguished pieces of social and health work interpretation of 1934-35.

Each year the Social Work Publicity Council, through its Awards Committee, reviews a vast amount of interpretative ma-

terial issued through different media by welfare agencies, magazines and newspapers. Outstanding examples of interpretation are selected for citation, the choice being based on sound application of good social or health work content, reader interest aroused, and general effectiveness. The purpose of these awards is to stimulate a higher type of social work publicity through citing particularly fine examples.

FIVE-YEAR CURES OF CANCER

Report of a Group of Cases

JOHN M. SWAN, M.D., F.A.C.P., Rochester

Chairman of the Subcommittee on Cancer of the Public Health Committee of the Medical Society of the County of Monroe

The New York State Committee of the American Society for the Control of Cancer uses the Monroe County set-up as a model for recommendation to the other Counties of the State. This is here given in brief.

In 1930 the president of the Medical Society of the County of Monroe appointed a member of the Public Health Committee to act as the Chairman of a Subcommittee on Cancer. The Subcommittee on Cancer was formed by asking the staff of each hospital in the County to name one of its members to become a member of the Cancer Committee, this member was then asked to endeavor to obtain the appointment of a Cancer Committee in his hospital, the object of such a Committee being to study the cancer cases admitted. It is through the hospital Cancer Committees that we are able annually to report the cases of five year cures in Monroe County.

Our object in reporting five year cures and the follow-up from year to year is to give the members of our profession concrete evidence that cancer, if diagnosed early and completely destroyed, is a curable disease. Table I shows the status of the cases remaining at the 1933 Annual Meeting.

In the group of breast cancers reported in 1930, one of the patients who is still living and has had no recurrence has been reported this year by Dr. Frank Fowler as having been operated upon again for cancer of the cervix. It seems hardly likely that this cervical cancer has any relation to the breast cancer that was removed in 1925.

In the 1931 group, one of the patients, still living, is now 102 years old, but has been reported by Dr. Shepard as being "feeble." However, there is no recurrence of the breast cancer. In the 1932 group, one of the patients has developed hemiplegia, and one died of pneumonia. Of

course, such a report as the last always raises the question whether the pneumonia was not, in fact, a metastatic lung cancer. In the 1932 group of cases of cancer of the cervix, the patient who died, died of paralysis agitans.

TABLE I

	Cases to be accounted for	Living		Dead	Lost
		Without recurrence*	Of other diseases†		
Carcinoma of the breast					
1930	6	7‡			
1931	7	7			
1932	12	9	1		2
1933	9	8			1
Carcinoma of the cervix					
1930	3	3			
1931	6	5			1
1932	4	3	1		
1933	1	1			
Carcinoma of the gastrointestinal tract					
1930	6	6			
1931	6	5			1
1932	1	1			
1933	1		1		
Carcinoma of the ovary					
1930	2	2			
1933	1	1			
Carcinoma of the male generative organs					
1930	3	3			
1931	2	1			1
Carcinoma of the uterus (fundus)					
1930	2	2			
1931	1	1			
1932	2	2			
1933	7	7			
Miscellaneous group					
1930	5	5			
1931	6	6			
1932	3	2			1
1933	3	3			

* There were no cases with recurrence † none died of cancer, ‡ one formerly reported lost added

Opening Remarks of the Chairman of the Scientific Session at the Tenth Annual Meeting on December 11, 1934 of the New York State Committee of the American Society for the Control of Cancer

One of the patients with cancer of the stomach, reported in 1931, still reported as living and without recurrence, last July had two attacks of chill followed by fever and accompanied by jaundice. The urine showed granular casts. The leukocytes were 3,600 and the color index 2.1. After suitable medical treatment the patient recovered and at the end of October was reported as "carrying on his work with much vigor." The physician reported that there was "an indurated area in the abdomen at the site of the incision which I take to be scar tissue but nothing which to me would suggest malignancy." I am very much afraid these attacks described as occurring in July indicate extension of the cancer to the liver. At the time of the original operation in 1926, the growth had extended by contiguity from the lesser curvature of the stomach to the liver, and the surgical destruction was wide of the liver extension. We are able to report this year 88 cases of cancer living and without recurrence from six to nine or more years following treatment.

This year we are able to report 30 additional cases of cancer treated in 1929 or before and reported living and without recurrence. (See Table II.)

The Committee of pathologists who examined and gave opinions on the material submitted consisted of Dr. Popoff, of Highland Hospital; Dr. Lindsay, of St. Mary's Hospital; and Dr. Hawkins, of Strong Memorial Hospital.

At the 1933 Clinical Conference of the American College of Surgeons, held in St. Louis¹ 24,448 cases of cancer were reported cured for five years and longer. I have tried to find a yardstick by which to compare the number of cases known to be cured in our own community with those known to be cured in other communities. If this comparison is made for the College of Surgeons' list with the population of the United States, it amounts to

TABLE II

Hospital and Diagnosis	Surgeon	Year
<i>General Hospital</i>		
1. Carcinoma of the breast.....	Prince.....	1929
2. Carcinoma of the breast.....	Stewart.....	1929
3. Carcinoma of the breast.....	Fenstermacher.....	1929
4. Carcinoma of the breast.....	Costello.....	1928
5. Carcinoma of the breast.....	Phillips.....	1929
6. Carcinoma of the breast.....	Farlow.....	1929
7. Carcinoma of the breast.....	Wooden.....	1926
8. Carcinoma of the breast.....	Phillips.....	1926
9. Carcinoma of the breast.....	O. E. Jones.....	1929
10. Carcinoma of the breast.....	Wooden.....	1929
11. Carcinoma of the breast.....	Zimmer.....	1926
12. Carcinoma of the breast.....	Wooden.....	1928
13. Carcinoma of the breast.....	Kellogg.....	1928
14. Carcinoma of the breast.....	Prince.....	1927
15. Carcinoma of the breast.....	Lewis.....	1929
<i>Genesee Hospital</i>		
1. Carcinoma of the breast.....	Sumner.....	1929
2. Carcinoma of the breast.....	Sumner.....	1929
<i>Strong Memorial Hospital</i>		
1. Carcinoma of the breast.....	McKinstry.....	1929
2. Carcinoma of the colon.....	W. J. M. Scott.....	1929
3. Carcinoma of the body of the uterus.....	Wilson.....	1929
4. Carcinoma of the cervix.....	Wilson.....	1929
5. Carcinoma of the body of the uterus.....	Wilson.....	1929
6. Carcinoma of the body of the uterus.....	Wilson.....	1929
7. Carcinoma of the body of the uterus.....	Ritchie.....	1929
8. Carcinoma of the body of the uterus.....	Ritchie.....	1929
<i>Park Avenue Hospital</i>		
1. Carcinoma of the breast.....	Huber.....	1929
2. Carcinoma of the testicle.....	Sperry.....	1929
3. Carcinoma of the body of the uterus.....	Huber.....	1929
4. Carcinoma of the body of the uterus.....	Hennington.....	1929
5. Epithelioma of the vulva.....	Lapi.....	1929

0.019 per cent or 19 to every 100,000 population. In the five years, 1930-34, inclusive, we have reported from Rochester 150 five-year cures. Some of these patients have since died of cancer. I have no doubt but that some of the 24,500 reported by the College have already died, or will in the near future, die of cancer. Our 150 five-year cures, however, amount to 0.044 per cent, of the Rochester population, or 44 to every 100,000, so I think we are doing quite as well in Rochester as they are doing in the country at large.

457 PARK AVENUE

Reference

1. *Surg., Gyn. & Obs.* 58:425, 1934.

MEDICAL RADIO BROADCAST

Under the auspices of the Medical Information Bureau of the New York Academy of Medicine, the following radio address has been arranged, to be broadcast from Station WABC and the network of the Columbia Broadcasting System:

Thursday, July 18, 1:15 P.M.—Speaker: Dr.

Frank E. Adair, Attending Surgeon and Executive Officer of the Memorial Hospital for Cancer and Allied Diseases. Subject: "Saving Life with Radium and X-Ray." Thursday, July 25, 1:15 P.M.—Speaker: Dr. Louis F. Bishop, Jr., Associate Visiting Physician, Bellevue Hospital. Subject: "Hobbies for the Child with a Handicapped Heart."

NEW YORK STATE JOURNAL OF MEDICINE

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EDITORIALS

The President's Address at the Health Conference

Dr Frederic E Sondern, addressing the 1935 Conference of Health Officers and Public Health Nurses, on June 26 last, made a notable address, published elsewhere in our columns. He stressed a whole hearted and cordial understanding between private physicians and the Public Health authority. To accomplish this desired end, mutual comprehension of respective responsibility and proper allocation and demarcation of fields of endeavor become necessary. By his address Dr Sondern has pointed the way toward this better understanding. By and large, the goal at which the private physician, the public health officer, and the public health nurse aim, is the same. It is desirable that they supplement one another to gain it.

Doctors, Patients, and the State

They who claim our attention and offer their wisdom for our leadership do well to give us straight talk. Albeit, Dr John A Hartwell has written a serious, calm, and philosophical essay upon Doctors, Patients, and the State in *Harper's Magazine* for July, yet we would have welcomed its presentation before some medical body for full and free discussion. There is much debatable ground in it, and

the cause at issue is not helped by inviting the public to sit in at the debate.

In *Collier's* of June 29, editorial comment is made upon the remarks of a magistrate, who when a peddler pleaded in a Brooklyn court over which he presided that he had not enough money to pay for a license, gave him the remarkable advice, "Take home relief. The city has plenty of money. Taking relief is not charity, it is just a redistribution of wealth." Continuing, the editorial says "What one light hearted city magistrate says in a minor court is important only as it is typical of what more important people say, and as it expresses a national tendency." The public is very easily swayed when one holds out any sort of panacea to it.

Dr Hartwell realizes that we are not living in normal times, and he hints the profession will not be granted the opportunity to develop a plan in line with the American tradition, but that we shall have to hurry and adopt some scheme acceptable to political forces who are on the move, and whose arrest in their progress toward their objective we cannot stem much less, have time for evolution to work out its ends.

There is one remarkable citation in his article. He calls attention to the fact that four odd millions of young Americans learned during the Great War, while in

the Army, the value of medical care obtained free. That is true enough, but they learned a lot more. They learned to get heat, light, food, and clothing, also gratis. They learned the freedom of all financial obligations which the man "on his own" at home, in peace times, usually assumes. It is as logical to argue that, therefore, these men and their political leaders shall now also ask that the Government feed, clothe, and house them, as it is that the Government shall give them medical service.

We, who are firm believers in the American tradition, in what its initiative, its habits of thrift and its individualism have wrought, cannot lend our aid to anything which will tend to lessen these traditional traits in the American people. We advocate a serious study of the problems as presented by Dr. Hartwell. At the present time, we shall still continue to take issue with him. We cannot accept any scheme which will include higher brackets of income within it, and thus remove from private practice the very group which now is the backbone of the average practitioner's clientele.

There is room in logic and reason for great diversity of opinion and of principle. Wishful writing gets us nowhere. We hope that the Committee which the State House of Delegates has ordered set up to study and analyze the various plans and schemes to the end that the whole American people may get adequate medical service, will take Dr. Hartwell into their conference. He is eminently fitted to contribute his wisdom to their discussions. There must be honesty between the factors at issue. With the implication of graft to which Dr. Hartwell alludes, this honesty comes into question.

Finally, we would welcome from somewhere a study of actual needs upon which to predicate the demand for the medical care which is so ardently advocated. We see no increase in mortality or morbidity statistics, nor do we know anywhere in the public press calls for medical service to any appreciable part of the American people which are remaining unanswered.

An Unusual Address

The public press is replete these days with addresses to graduate classes at many of the country's leading universities. Public interest in this is natural enough. Older men, by a process of rededication, keep alive the goal which they viewed with such enthusiasm, as they stood at the threshold of the long path that led to their respective careers. We in medicine have often to re-dedicate ourselves to our life-work. We too often find distraction in the intriguing times in which we find ourselves, with the overstress they place on economic features. We are too often handicapped in the maintenance of ideals which underlie the great social science we serve. We find it good to listen again to stimulating graduation addresses.

In his address delivered at the Last Day Exercises at the New York University College of Medicine, Prof. E. D. Friedman made a notable contribution. He told the graduates that medicine is not a business; that the earning of a livelihood would be incidental to the proper practice of medicine, and that the major part of the new doctors would probably never grow wealthy in the practice of medicine. He stressed that a medical career is one of service to the community, and that willingness to sacrifice must be the foundation stone of the career of any outstanding physician. He drew a beautiful analogy between the human body and its parts, and society, in general, and the part the profession plays in it.

"Within the human body there are several well-defined principles of organization which serve it in its proper functioning. The heart does not circulate the blood for its own use alone, nor does the liver make glycogen for its sole consumption. In the healthy body, there is physiological honesty between organs. Viewed in the light, the financial misdeeds of the boom era, when bank presidents enriched themselves at the expense of depositors and stockholders, represent a state equivalent to physical illness.

"Cannon, with his principles of homeostasis (*The Wisdom of the Body*), as well as Claude Bernard, with his principles of internal equilibrium, have shown the human organism controls with great delicacy wide

swings or deviations from the normal. Is it too much to hope that the so called business cycle might be brought under control, to a state comparable to physiological equilibrium which would make it possible to increase the productive period of man, and to secure greater co operation among the members of our social organism for a common goal?"

It is good to publish this, that all of us may be renewed in that faith which was so strong in us as we stood where stand the young men who heard him

Graduation—and Education

In the month of June, Commencement exercises all over the country added thousands of new physicians to those already in practice. Within the next few years these tyros will have many occasions to appraise the professional training they received and discover its shortcomings.

No one can fail to acknowledge the remarkable advances made in medical education in the course of the current century. Neither can it be denied, however, that there has been a culpable failure, in recent years, to make necessary changes in the curriculum. The student is crammed with needless detail in outmoded courses while many new and important subjects are skimmed over or ignored. In spite of the comprehensive report of the Commission on Medical Education, little has been done to remedy the defects observed or carry out corrective recommendations.

The new graduates in medicine will find that their education, far from ending, has just begun. Not only must they supply deficiencies of their undergraduate training by continued study and practical experience, but they must keep abreast of a continually expanding body of knowledge. As Dean Rappleye of Columbia puts it, "Every physician must continue to be a student throughout his professional life if he expects to be successful scientifically." If he decides to engage in a specialty he must prepare himself by diligent formal study as well as clinical apprenticeship.

Unfortunately, opportunities for graduate instruction do not abound. While extramural courses are given by some universities, on the whole there has been a lamentable failure to utilize available teaching material and facilities to the utmost. Quoting Dean Rappleye again, the money available for graduate medical education (from endowments, taxation, and sources other than tuition) is less than 3 per cent of the total contributed for undergraduate training. Obviously, more financial support is required to provide adequate opportunities for graduate study.

The impetus for elevation of the standards of medical education has always come from the profession itself. Organized medicine is eager to join hands with the universities in the formulation of an educational program that will satisfy the requirements of medical practice both quantitatively and qualitatively.

Illogical Arguments

The propaganda for compulsory health insurance, which is accepted as gospel by a number of supposedly liberal publications, is full of contradictions and fallacies which escape the notice of most lay readers. While the avowed purpose of this system is to prevent disease—or at least reduce morbidity—and raise the standards of medical care, no statistical data are presented to show to what extent these hopes have been realized in countries with obligatory prepayment. As a matter of fact, there is nothing to indicate a decrease in morbidity anywhere due to sickness insurance. In the field of prophylaxis a highly important gauge—the extent of immunization against diphtheria—shows the United States and Canada to be far ahead of any nation with forced prepayment. From the viewpoint of quality also the service available to the lower middle classes here far surpasses that obtainable by comparable economic groups anywhere in Europe. Is it by accident that these highly relevant facts are invariably ignored by the advocates of sickness insurance?

On the economic side similar evasions are practiced. The protagonists of obligatory sickness insurance pose as friends of the low-paid worker but they neglect to mention that in most countries the workers themselves were the bitterest opponents of this system. Labor's antagonism is entirely understandable to the initiate. According to the report of the Committee on Costs of Medical Care and others friendly to health insurance, only about 10 per cent of the population is unable to defray the expenses of illness in normal times. To supply the needs of this 10 per cent it is proposed to levy a tax on workers in the low income class. The amount deductible each week, in the case of the healthy 90 per cent, means a decline in living standards and a diminution of the likelihood of accumulating a small capital by regular savings.

Some observers remind us that there is a direct correlation between low income and high morbidity—and then leap to the illogical conclusion that compulsory health insurance would sever the causal chain. As in the basic problem, the remedy here is economic rather than medical: employment at adequate wages so that the worker may enjoy a decent standard of living and, in the event of illness, pay for all but the protracted or special services which are not covered by insurance in most countries anyway.

Mechanism of Secretory Glands

The functional activity of the numerous secretory glands in the body has provided a fertile field for investigation. In recent years, much has been contributed toward a better understanding of the endocrine glands and their physiological performance. Progress has also been made in clarifying the manner in which the other secreting glands function and the recent studies of Ingraham and Visscher¹ in

this connection are extremely interesting.

They selected the secretory glands of the stomach and pancreas for their experimental work. While these two are alike in function, they are essentially opposite in character in that the gastric glands yield an acid secretion, whereas the pancreas produce an alkaline fluid. Several theories have been advanced concerning the mechanism which enables these structures to concentrate some constituents from the blood while diluting others. An example of this occurs in the gastric juice, where the hydrogen content is a million times as great as in the plasma from which it came. Most observers have utilized various dyes for the determination of the selective action of secretory glands and have obtained differing results with consequent diverse conclusions.

Ingraham and Visscher, however, approached the problem by studying the physicochemical characteristics of the dyes eliminated by these organs after the dyes had been injected intravenously. They found that the only constant factor which influenced the recovery of the dye-stuff in the glandular secretion was the ionic charge of the chromogen. Into the gastric juice, only those dyes which are electropositive will be secreted by the gastric glands, whereas in the pancreatic juice, only electronegative dyes appear. Repeated experiments verified the constancy of this factor and established its presence despite changing conditions in the experiments themselves.

The authors feel that the activity of these two opposite sets of secretory glands cannot be accounted for by differences in the distribution of acid, neutral, and alkaline phases. The theory most in accord with their findings is the pore theory which assumes a specific ion permeability as being due to the existence of charges on the walls of membrane pores. Therefore, for the gastric glands to be able to restrain electronegative dyes, their pores must be negatively charged.

It seems plausible, from the findings of Ingraham and Visscher, that the blood chlorides, being positive ions, are at-

¹ Ingraham, R. C., and Visscher, M.B.: Studies on the Elimination of Dyes in the Gastric and Pancreatic Secretions, and the Inferences Therefrom Concerning the Mechanism of Secretion of Acid and Base, *Jour. General Physiol.* 18: 695, 1935.

tracted by the negatively charged pores in the gastric glands, and are thus able to pass the barrier in the stomach. The disturbance of the pH of the blood by the withdrawal of chlorides would then be compensated for by the return of bicarbonate, lactate, or some other anion of a weaker acid, leaving the negative hydrogen ion to combine with the chloride to form hydrochloric acid. A similar process is attributed to the pancreatic glands with the exception that here the pore charge is electropositive and the resultant secretion alkaline.

This conception of the physiology of these glands offers a new viewpoint to the clinician in the administration of drugs and chemicals intended to influence the character of the gastric and pancreatic secretions. Clinical research will undoubtedly contribute much to the practicability of these experimental findings as applied to bedside medicine.

The Parathyroids and Raynaud's Disease

Raynaud's disease, while comparatively rare in occurrence, is a dreadful malady, and those afflicted with it sooner or later suffer untold agony. Its treatment, until now, has afforded anything but satisfactory results, and, in the main, has consisted of massage and passive hyperemia, Nitroglycerine, and the extracts of the thyroid gland and anterior pituitary lobe have been used with but little success. Cervical and lumbar sympathectomy has been employed with more favorable, but not lasting, results. The administration of calcium has proven thus far to be the most useful therapeutic agent for the amelioration of the symptoms resulting from this vasospastic lesion.

Bernheim and Garlock¹ advance the opinion that Raynaud's disease as well as other vasospastic conditions are the result of a faulty calcium metabolism. While no exact knowledge is at hand to explain

the mechanism by which this disturbance produces the manifestations seen in this disease, they feel that the clinical improvement following a high calcium intake warrants the acceptance of this hypothesis. The latter has led them to the conclusion that failure to obtain relief in a given case, following a long period of calcium therapy, is indicative of a pathological change in the parathyroid glands which are responsible for the maintenance of the calcium level. In such instances, they advocate the removal of at least two of the parathyroid bodies.

Bernheim and Garlock have treated 6 cases of Raynaud's disease in this manner with dramatic relief of symptoms in each case. Some of these cases were associated with scleroderma. Within 24 hours post-operatively, all pain was markedly lessened and the color in the extremities had returned to normal. In addition repeated observations as to the range of oscillation and the degree of spasm showed a rapid improvement. These cases have been under observation by the authors for a period ranging from three months to a year and all have continued to do well. Their contention is further borne out by the finding of pathological changes in all the parathyroid glands removed from patients suffering from Raynaud's disease.

Further observation, of course, is necessary, and additional cases must be presented before definite views can be expressed. However, the logical approach to the problem which these authors present speaks for the probability that the therapeutic course which they advance will afford immense relief to sufferers of the vasospastic diseases.

CURRENT COMMENT

The New York Sun, Monday, June 24, 1935, commenting editorially upon the honorary degree bestowed by Harvard University upon Dr. Walter Prentice Bowers, who at the age of eighty years is still active in practice, says that his day begins at 6:30 A.M., and besides his activity in practice he takes time to go to Boston five days a

¹ Bernheim, A. R., and Garlock, J. H. Parathyroidectomy for Raynaud's Disease and Scleroderma. Preliminary Report, *Ann. of Surgery*, 101: 1012, 1935.

week to edit the *New England Medical Journal*. Continuing, the editorial says, "In no way does it detract from the dignity or the fame of Dr. Bowers to recall that he is typical of a great number of men in his profession, and in other professions and callings, who, as a matter of course, are bearing the burdens of humanity's affairs. What will become of them when Social Security replaces Individual Responsibility, and trade union rules enforced by government bureaucracy beneficently retire everybody on pension at 55 or 60, confiding them to a sublimated poor farm, or a glorified version of an institution Dr. Bowers may recall, the Tewksbury Almhouse?"

We hope that day is far distant when such individualism as exemplified by men like Dr. Bowers will be discarded for the regimentation and bureaucracy of social security in the guise of socialized medicine, or compulsory health insurance schemes.

THERE IS TO BE an international Medical Week in Switzerland between September 9 and 14 at Montreux. The program contains many well-known names, and the subjects are to be presented with particular regard to the needs of the practicing physician.

THE RECENT OPENING (May) of a post-graduate school of medicine in Hammer-smith, a suburb of London, has removed from the largest city of the world, the reproach that it has lagged in graduate medical instruction, and has failed to utilize the large clinical material for study and for research. The new school was opened by the King, who paid a fine tribute to the medical profession during the exercise.

ACCORDING TO the *London Sunday Times*, May 12, one certain prediction is presented. Scientific adventure and discovery will persist and accelerate. . . . Twenty-five years hence, the average expectation of life will be longer; we shall retain our youth and vigor longer; diseases that now baffle will be curable; even the common cold in the head may disappear. Thus does the *Medical Record* of June 19 comment on what science will do in the next 25 years.

THE ANNUAL REPORT of the Council of the British Medical Association is printed in the supplement to the *British Medical Journal* for April 20 last. It includes a report by Dr. Alfred Cox on the Ninth Annual Conference of the Association Professionnelle des Medecins. Quoting from this, there appears the following: "As usual, the reports of representatives on this subject (Health Insurance) produced much discussion, and that from Hungary provided a

real sensation. In that country, as in all when politics has been allowed to interfere with health insurance administration, the profession has had a great struggle for professional freedom and the recognition of the relations which ought to exist between doctor and patient. . . . The caisses have been allowed to be extravagant . . . with the result that the Government had to step in to preserve the system from bankruptcy. The subscriptions were increased, the benefits and the payment to the doctors cut down—the latter by 33 per cent. The culmination came with the suppression of the right to free choice. . . ."

THE PRIMARY CONSIDERATIONS of the physicians constituting the A.M.A. are the welfare of the people, the preservation of their health and their care in sickness, the advancement of medical science, the improvement of medical care, and the provision of adequate medical service to all the people. These physicians are the only body in the United States qualified by experience and training to guide and suitably control plans for the provision of medical care. The fact that the quality of medical service to the people of the United States today is better than in any other country in the world, is evidence of the extent to which the American medical profession has fulfilled its obligations. (From the Reference Committee's Report, adopted at the special meeting of the A.M.A. House of Delegates last February.)

ACCORDING to the *California and Western Medicine*, the *Journal of the California Medical Association*, this organization has spent \$35,000 of its reserve funds as an expression of its interest in the solution of these problems (health insurance); but like the State treasury, it is now where it must stop, look and listen, before making additional appropriations. . . . Two years ago, it was stated that several of the large eastern foundations, such as the Milbank, were anxious to take part in the California surveys; but whether such endowing institutions will now come into the California picture, to aid the two new interim committees, is not known at this time. (Vol. 42, No. 6, page 472). The insurance bills were not pushed nor passed in either legislative house in California this year. Committees are in existence, probably to keep the issue alive. Far be it for us to advise, but would it not have been better to have *stopped, looked, and listened before* all that money was expended. Health insurance and all it implies is too well known to throw more money away surveying it. At least, so it seems to us.

Society Activities

An Address by the President of the Medical Society of the State of New York

At the Annual Conference of Health Officers and Public Health Officials which was held on June 26, 1935, at Saratoga Springs, N. Y., Dr. Frederic E. Sondern delivered an address, the full text of which follows:

* * *

It is with pleasure and satisfaction that I bring to you, the Health Officers of the Empire State, the cordial greeting of the Medical Society of the State of New York.

We as practicing physicians and you as guardians of the public health are concerned with mutual problems. In our hands jointly rests the conservation of the health and the consequent happiness of our fellow citizens in this State.

Your record in the improvement of the public health is an acknowledged achievement. We take credit for our portion of this success. As practicing physicians we admire your progressiveness and realize full well the benefits which accrue to the people, to the medical profession and to the science of medicine as the result of your endeavors.

You and we, as citizens of the State, have been fortunate in the selection of its chief administrative officers in the field of public health. The gratifying results which have been attained are due in large part to their wise administration and their vision, as well as to your faithful and efficient execution of their commands. Not a little credit must also be given to the well directed research in this field and the application of the results of it to the promotion of public health.

The last fifty years have seen a tremendous evolution in the work of practicing physicians and of health departments. This has necessitated extensive readjustments for both the private physician and the public health officer. In this evolutionary process misunderstandings have occurred from time to time as is bound to happen when new practices are introduced in any order. The traditional but wholesome conservatism of the medical profession has no doubt been a complicating factor from your point of view, but due consideration to proper planning of health activities and examination of the philosophy underlying their practice, can do much to resolve these misunderstandings. There can be no actual quarrel between the practicing physicians and the public health authorities of the community, for as previously stated, their prob-

lems as well as their ultimate objects are mutual. Only through continuous constructive co-operation based on a complete understanding of the respective spheres of action, can these problems be met to the best advantage of all concerned, by those whose duty it is to cope with them. It is our privilege as the physicians of the community, we as private practitioners joining with you as public health officials, to meet to the best of our collective ability, the challenge of the present-day health needs of our fellow citizens.

It is true that at least until quite recently, preventive medicine has not had the attention it deserved on the part of the average practicing physician. In recent time more serious attention to it has been stimulated by public health activity and a concerted movement by the medical profession to popularize the periodic health examination. These activities resulted in repeated requests for an outline of the practical essentials in the prevention of disease, and in consequence the Public Health Relations Committee of the New York Academy of Medicine decided to publish a small manual on the subject. It was written by over twenty collaborators, each on the subject of his specialty in relation to the prevention of disease. This commendable small volume quotes in its introduction an interesting paragraph from the Report of the Commission on Medical Education of 1928, as follows:

Even at present and increasingly in the future, the employment of preventive measures must be chiefly the responsibility of individual practitioners of medicine, in part working in cooperation with health authorities, in larger part on their own initiative. If practitioners are not trained properly in this field a great portion of their value will be lost. It can scarcely be questioned that, in most if not all medical schools in this country or elsewhere, the general impression made upon the student does not bring this out clearly, nor is the physician as a rule adequately trained to meet responsibilities of this sort in actual practice.

Thus there can be no doubt that this widespread lack of interest in preventive medicine in the past on the part of the practitioner must have had much to do with the lack of co-operation previously mentioned, and was probably the basis of the misunderstandings referred to.

Broadly speaking, the protection of the

public health consists of two main functions, the environmental and the personal.

The entire realm of the control of disease through the control of the environment is conceded to the public health official. It is his duty to protect the food and water supply, to exercise supervision of sanitary matters, to provide facilities for the control of communicable diseases and to undertake the many other activities connected with the maintenance of an environment as free from danger as possible to the health of the community. Epidemiological and vital statistics work are in his field as well, for obvious reasons. The public health authorities in their health educational work should inform the public of the need for vaccination or inoculations and even see to the passage of laws to make them compulsory when this is indicated. While health education is the keystone for better personal health, when overdone it can do harm. Robert Hutchison at a joint meeting of the British Medical Association and the Canadian Medical Association five years ago, questioned the desirability of public health education propaganda and making the public "health conscious"; claiming that this works largely in the interests of cranks and faddists. While his picture is doubtless overdrawn, it is true that the average person can obtain safer advice concerning his health from his physician than from a public lecture. The care devoted to the preparation of the public health education program by the New York State Department of Health is well known, but this is by no means emulated by other agencies in this as well as other states.

The maintenance of personal health and the practice of curative medicine involving the treatment of the individual is a personal service and the prerogative of the practicing physician. Only when the practicing physician fails in his duties to safeguard the community, should the health authorities take over any part of this service.

Thus, in a broad way, the two services are separate and distinct, and there is no value whatever in the statement sometimes heard, that if physicians as a whole were competent there would be no need for a department of health.

There is no place for competition between health department maintained services in the sphere of the practitioner and privately maintained services. Competition of this nature naturally leads to friction. Many of the differences of opinion, both concerning the practicability of some of the measures proposed by the public health authority, or the expansion of diagnostic and particularly

the therapeutic facilities offered by the State, could be avoided were both organized medicine and public health authorities more meticulous—the one, in the exact interpretation of what is intended or done; the other in detailing particulars to show the absence of any substitution of public health authority service for the legitimate practice of the private physician.

It is generally assumed, to be sure, that there is no intention on the part of the public health authority to replace the functions of the private physician with those of the public health service physician, unless public safety demands it. Unfortunately, however, many actions by various departments of health allow the medical profession to question whether this policy is being observed in every particular. Services are frequently rendered with no regard for the ability or even willingness of the patient to secure similar care from his own physician and at his own expense instead of at the expense of the State. The placing of eyeglasses on school children, the reference of children for tonsil operations to municipal or other public hospitals, the histological examination of tumors and other diagnostic laboratory services not related to communicable disease, the diagnostic aids for ambulatory patients not only in cases of tuberculosis and venereal disease but in diabetes and thyroid disease as well, to say nothing of the many treatment clinics of various kinds, are some of the medical activities by departments of health in various cities and states. That these and other medical services must be rendered to the indigent without cost, by the community, the philanthropic institutions or the public health authority goes without saying, but that such services should be limited to the indigent and not include patients who can pay for them, is no more than justice to the medical profession, to the tax payer, and to the individual himself.

The desirability of existing and additional laboratory and clinical expert diagnostic facilities and the furnishing of specific remedies for those patients of physicians who cannot afford to pay for these necessary additional and often expensive items, is undoubted and commendable, but again such services and supplies must be restricted to persons who cannot meet these expenses in the usual way.

A wholehearted and cordial understanding between the private physician and the public health authority will be made complete by an earnest analysis of the question of proper allocation of responsibilities and division of health activities through mutual co-operation in the interest of the individual

and collective health of the community. This can be brought about by a more intimate relationship between the public health authority on the one hand and the representative organized medical groups acting for the private practitioner on the other. Need for this closer relationship exists to remedy duplication of effort along some lines and lack of effort along others.

I know that both the public health authority and organized medicine are eager for such co-operation, and I predict that the outcome will meet with the full approval of both.

Workmen's Compensation Committee

COMMUNICATION NO. 5—JUNE 29, 1935

Pending the completion of a satisfactory schedule of fees, the appointment of a full Industrial Council, the composition of regulations and definitions, and the consideration of some of these things through the Attorney General's office before being promulgated by the Commissioner—there has been an unavoidable delay for which the representatives of the Society are in no way responsible.

Therefore, the Commissioner will rule that the care of the injured workmen after the first day of July, may be undertaken by those physicians who have filed their applications with the local County Medical Societies and whose names are in the process of being forwarded to the Commissioner's office. This work may be undertaken on the same schedule of fees and under the same regulations which have prevailed during the time immediately preceding July 1, 1935.

The application blanks for compensation medical bureaus are being printed now by the Department of Labor and, as soon as

they are ready, will be available to all those who desire to register to conduct such bureaus. In regard to this matter, the Commissioner has suggested that all employers' and physicians' bureaus now in operation may continue in operation until applications have been filed by them and have been acted upon by the local County Medical Society and by the Industrial Commissioner.

CHAS. GORDON HEYD, M.D., *Chairman*

DAVID KALISKI, M.D.

FREDERIC E. ELLIOTT, M.D.

The 1935 Annual Conference of County Society Secretaries

Tuesday, September 8, 1935, has been chosen as the date for the next annual conference, and the DeWitt Clinton Hotel in Albany has been designated as the place of meeting.

Scientific Exhibit Awards

The Committee on Awards for the Scientific Exhibit at the Albany meeting, composed of Dr. William P. Howard, Albany, Dr. C. Knight Deyo, Poughkeepsie, Dr. Samuel J. Kopetzky, New York, after most careful consideration report the following:

First Award Class I (Research)—Drs. Jane Sands Robb, J. G. Fred Hiss and Robert Robb, Syracuse, "Further Studies on Coronary Distribution in Human Hearts."

First Award Class II (Clinical Exposition)—Drs. Bernard Samuels and E. B. Burchell, New York, "Anatomical Preparations of Lye and Car. Rare Old Books."

The Committee, although making no further awards, wishes to commend the high character of the exhibits as a whole and in particular the many prepared and demonstrated by individuals largely through their own unaided efforts.

Correspondence

(THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked private. All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.)

858 Seventh Avenue
New York City

To the Editor

An article "Dermatitis Venenata Due to Ephedrin," by Maurice Kornberg, appeared in the NEW YORK STATE JOURNAL OF MEDICINE, in the June 15 issue of this year, on page 620.

I have to correct the impression left by the author that there is no report in the literature, as far as he could determine, of similar cases. As a matter of fact, there are quite a few instances where ephedrin is

reported as having caused a dermatitis of various sorts.

I beg to call the author's attention, as well as others interested in this subject to several references which can be found in an article published by me in the *British Journal of Dermatology and Syphilis* 45:225-237 (June), 1933, where I reported a rather severe instance of such an eruption. There are undoubtedly other cases that have been unpublished.

Yours truly,

E. WM. ABRAMOWITZ, M.D.

June 18, 1935

County Societies

Bronx County

MAYOR LA GUARDIA of New York laid the cornerstone on June 18 for a district health center in the Bronx, the first of thirty similar buildings to be erected throughout the city in the administration's program of preventive medicine.

Costing \$175,000, three stories high, of brick and stone, the building is to contain facilities for pre-natal, baby and pre-school conferences, dental services, diagnostic and consultation tuberculosis station, x-ray department, district nursing supervisory headquarters for home and school nurse. There will be rooms for social work programs, office space for organizations aiding in health, such as the welfare organizations and visiting nurses' service, and the executive offices of the district health officer.

"As a part of Mayor La Guardia's active center plan," said the Commissioner of Health, "this building and that of the new hospital, we have loans and have seven of these buildings. The Bronx, however, has organized health centers."

This is the first new center for the several acute health centers, officials said. Although in the Bronx had the lowest death rate in the city, 7.76 a thousand, the Mott Haven area had a rate of 9.14 a thousand. The infant mortality rate in the Bronx was 45.3 a thousand live births, but in the Mott Haven district it increased to

The death rate from all forms of tuberculosis was 40.6 a 100,000 in all the Bronx, but in the Mott Haven district it was 59 a 100,000, and in some small sections of it ran as high as 71 to 116 a 100,000. Years ago the region was a fairly fashionable country place for New Yorkers of means. Today it has some of the oldest tenement districts in the city, centering around the bridge head where the elevated crosses into the Bronx. The district had in 1934 an estimated population of about 234,000.

The health program to be conducted from the new center is to be educational rather than clinical.

Kings County

BROOKLYN's first resident to be treated under the "three-cents-a-day" hospital care plan of the Associated Hospital Service of

New York was Miss Anna Goodman, of 1532 Ocean Avenue. She entered Israel Zion Hospital on May 30 where she underwent an operation. She was discharged on June 14. It is estimated that the value of the hospital services she received for her initial payment on the "three-cents-a-day" plan was over \$100.

Monroe County

ELEVEN GRADUATES of the University of Rochester Medical School were commissioned first lieutenants in the U. S. Medical Corps Reserve, following the commencement exercises, on June 17.

THE STRONG MEMORIAL HOSPITAL in Rochester expects a cut in its deficit of \$41,000 this fiscal year as compared with last year. The report of Dr. Nathaniel Faxon, retiring director, based on computations for the last nine months and expectations in the next three, indicates a \$178,874 deficit in 1934-35, instead of the \$220,610 lost the previous fiscal period.

New York County

THE NEW YORK ACADEMY OF MEDICINE has announced the award of a European scholarship to Dr. Andrew M. Babey. Dr. Babey received his M.D. from Harvard Medical School in 1933.

He has completed his internship in Bellevue Hospital. He plans to spend a year in London with Dr. A. F. Hurst at Guys Hospital.

NEW YORK CITY's hospital system is in desperate need of \$10,000,000 if it is to maintain decent hospital service, particularly in regard to chronic and venereal patients, Dr. S. S. Goldwater, Commissioner of Hospitals in New York, told the American Medical Editors' and Authors' Association at its annual meeting at Atlantic City on June 15.

"They desperately need \$10,000,000 to keep going," Dr. Goldwater said. "Facilities for the care of chronic and venereal patients in particular are extremely inadequate."

"The intern situation also is becoming desperate. These young doctors formerly worked for nothing and received their pocket money from home. The depression has cut that off. Budgets do not provide for paying them a salary without rearranging the whole financial structure of the hospitals. Yet they cannot get along now, inside or outside of the institutions, during that stage of their training."

DR. JOSEPH H. GLOBUS, associate neurologist, Mount Sinai Hospital, and his associate, Dr. Sidney M. Silverstone, a member of the house staff, have been awarded the Lucian Howe Medal in Ophthalmology for their work on the diagnostic value of visual field defects and other ocular disturbances in supratentorial brain tumors. Dr. Globus is also associate professor of neuro-anatomy and neuropathology at New York University, and Bellevue Hospital Medical College. The prize is awarded by the Medical Society of the State of New York.

DR. SIMON FLEXNER, director of the laboratories of the Rockefeller Institute for Medical Research since the opening of the institute in 1903, has presented his resignation to take effect on the appointment of his successor. Dr. Flexner is 72.

Saratoga County

The story of the prize grizzly bear bagged by Dr. G. Scott Towne of Saratoga Springs last fall in the Canadian Rockies is told in an attractive book of typescript narrative, profusely illustrated with photographs and bound in limp morocco leather, which has reached the STATE JOURNAL office. Dr. Towne was awarded the prize for the finest grizzly taken in North America in 1934 in the fourth national championship contest for big game hunters held by the J. L. Clark Studios. The bear weighed about 1,000 pounds, and measured 6 feet 4 inches from the tip of his nose to the end of his tail. Dr. Towne was accompanied by Mr. J. Allen Van Wie of Troy and had as his guide J. B. Hooker, of Dome Creek, B. C. or "J. B." for short.

The two friends reached their guide's camp on September 19 and spent several days in hunting other game and preparing bait for the expected bear and a nest or blind for the hunters. The first grizzly was not so huge as the prize one, but was big enough for any ordinary hunter. It crossed their path on September 25, when the doctor and his guide were sitting in their "nest" overlooking the bait. Dr. Towne writes of this grizzly as "he," but owing to later discoveries he named the animal "Queen of Sheba." In his own words:

At 5:40 J. B. heard a large twig snap to the west of us and whispered to me, 'there he comes.' In a few seconds we saw him pass between the trees. He made a beautiful picture as he approached with a firm, confident stride like the monarch of the forest and mountain that he is. Suddenly he caught a scent, began to circle down wind from us. He came along with his nose in the air and finally stopped about 100 feet from us, with his feet on a log and evidently trying to get the scent. It was time for action

and instantly I let go a 220 grain hollow point into his chest. He turned a backward somersault and performed generally about as a chicken does with its head off. The giant strength which that bear displayed following the shot was marvelous.

I shall never forget the beautiful picture the bear made as he approached the crow's nest and stood there half-erect, with his front feet on that log. It was worth the price of the whole trip to see that picture. It also furnished a thrill when one realized that he was face to face with the most dangerous wild animal in North America, at a distance of 100 feet.

It had been a wonderful day. A caribou and a big grizzly in one day and a good view of large black bear.

Wednesday, September 26. The job for the day was to skin the bear. We reached the bear at 8:45 A.M. and worked until 12:30 before the hide was off. It was a tough job. Then I did a



DR. TOWNE AND "KING SOLOMON"

autopsy to see what destruction had been done. It was amazing. Two ribs were broken off and shattered, the lung partially destroyed, the liver nearly torn from its attachments and about one third of it riddled, the stomach torn half in two and numerous punctures of the intestine throughout the abdomen. While the shot was bound to be fatal, it was a little surprising to have death follow in less than 1½ minutes. He died from shock and hemorrhage, following the awful destruction of his abdominal viscera.

The bear measured 8 inches between the ears 15½ inches from the nose to the back of the skull and 72 inches from the nose to the tip of the tail. It was not a large grizzly, probably explained by the fact that it was a female.

It was a surprise to see how small the brain of a full grown grizzly really is. I judged it was about the size of my clenched hand. Its outward appearance was much like a human brain but with a cerebellum considerably larger in proportion to the cerebrum that is found in

humans. The optic nerves were about the size of the lead in an average pencil, while the olfactory nerves were fully three-quarters of the size of the pencil itself. No doubt this explains why the eyesight of bears is so poor in addition to the fact that their eyes are no larger than those of my Airedale dog which weighs about 60 pounds, and their scent so very keen. The areas in the nostrils of a bear sensitized by the olfactory nerve are 5 or 6 inches by $1\frac{1}{2}$ inch wide, while the sensitized areas in the human are approximately the size of the end of one's thumb in each nostril. The auditory nerve as it leaves the base of the brain is very large.

A few days later the guide had a narrow escape from another grizzly at a time when his loss would have left Dr. Towne alone in the wilds to almost certain death. Then on October 2, Dr. Towne and "J. B." took up their perch in the "nest" at 4:15 P.M. to await their luck, which arrived in 25 minutes. Says the doctor:

We discussed the probable avenues of approach that the bear might make and even looked through the telescope sight at imaginary bears feeding on the baits. It was difficult for me to hold the gun steadily in the position I was sitting without a gun rest. J. B., with his usual resourcefulness, suggested that he lie across my knees from his seat as we sat facing each other and that I use his back for my gun rest. We tried it and it worked well. J. B. was facing bait No. 1 and I was facing bait No. 2.

Everything was perfectly quiet when suddenly a huge bear came out of the woods and walked toward bait No. 2. The show was on at 4:40 P.M. He was so big that I at first thought it was a moose. He came into the meadow after zig-zagging about for a few minutes, and went to the bait and began looking and smelling it over. Finally he turned his left side to me, J. B. got into position across my knees and with a very careful aim, I gave him a 220 grain hollow point in the left shoulder. "King Solomon" took his dose and still remained standing. I reloaded and gave him another, this time in the neck just in front of the shoulder. He dropped instantly without making a sound, and, with a few mighty convulsive movements, was still. We remained in the nest until all signs of any respiration had ceased (we were watching through our telescope sight), and then we went to look over our prize.

"King Solomon" looked like the grandfather of all grizzly bears. He was simply huge. His hair was very dark, with the characteristic silver tip marking largely confined to his head and back. His sides, belly, and legs were black. We estimated his weight to be 1,000 pounds or more. The measurements as he lay upon the ground were: $10\frac{1}{2}$ inches between the ears, $18\frac{1}{2}$ inches from tip of nose to back of skull, 76 inches from tip of nose to tip of tail. His middle claws on each of his front feet were $3\frac{1}{2}$ inches long; width of front feet $6\frac{1}{2}$ inches; length of front feet 10 inches from heel to toe; length of hind feet 12 inches from heel to toe; width of hind feet $6\frac{1}{4}$ inches. The hide measurements were as follows: Length from tip of nose to

tip of tail 97 inches; width of hide between front legs from claw to claw 101 inches.

Schenectady County

THE SEMI-ANNUAL MEETING of the Schenectady County Medical Society was held on June 20 at the Shaker Ridge Country Club. Golf was played during the afternoon and dinner and entertainment were held at night. Dr. J. R. Schermerhorn was in charge of arrangements.

Tioga County

A SPECIAL MEETING of the Tioga County Medical Society in Owego on June 18 fixed a fee of \$2 for applications to practice under the new Workmen's Compensation Law, passed upon 24 applications, and authorized the Comitia Minora to act on future applications.

Westchester County

DR. JULIUS C. GRAY was chosen president of the New Rochelle Medical Society at the annual dinner meeting at the Wykagyl Country Club on June 17, succeeding Dr. F. Duncan Barnes. Others chosen were Dr. Sigurd C. Sandzen, vice-president; and Dr. Henry B. Wightman, secretary.

Entertainment was provided by the Society's orchestra, composed of Dr. Henry Margotta and Dr. Wallace, violins; Dr. Sydney L. Harris, piano; Dr. Bernard L. Toothaker, violin; Dr. August Beck, Dr. Leslie Burwell, mandolins; Dr. DePasquale, guitar; Dr. Gray, banjo, and Ned Burwell, traps.

In a golf tournament for a cup offered by Dr. Charles Ogilvy, Drs. Ralph M. DePasquale, Kenneth B. Wallace, and Morley T. Smith tied for first place with scores of 89. Dr. Smith won the toss and was presented the cup.

Second District

THE ANNUAL MEETING of the second district branch of the Medical Society will be held the third Thursday in November at the Garden City Hotel, Garden City. The date and place were set at a dinner-meeting of the district executives held at the St. George Hotel on May 27.

Dr. Carl Boettiger, president of the district, was in charge of the meeting. The presidents of the four county organizations, making up the second district branch, were present. They are Dr. Sturdivant Read, Kings; Dr. Morris Bender, Queens; Dr. George A. Newton, Nassau, and Dr. Wilbur C. Travis, Suffolk. Also present was Dr. Joseph Lawrence, executive member of the State Medical Society.

Across the Desk

NO TUBERCULOUS PERSON is employed in the entire school system of Decatur, Ill. All teachers in the service have periodical health examinations, and applicants must bring health certificates or be examined. Teachers found to be infected are given leave on pay until they recover. One Decatur conquered the Barbary pirates; another is doing equally good service against a worse foe.

NOW THE "MOTHER-LOVE HORMONE" has been found—secreted by the pituitary gland at the base of the brain. It has been known as prolactin for several years, but only recently has it been discovered that it inspires maternal feelings in rats, mice, and pigeons which had no such emotions before. "In some cases the maternal instinct is exhibited in definite form within 24 or 48 hours after the first injection," says Dr. Oscar Riddle, one of the discoverers. As we think of the thousands of neglected children left by hard-boiled mothers to "grow up anyhow," the field of the new hormone staggers the mind and makes any comment seem inadequate.

SOME 200 health insurance plans were studied by the Bureau of Medical Economics of the A. M. A. before they decided to report that no one plan seemed suited to the whole country, any more than one medicine is good for all diseases. So they recommended that each locality work out its own scheme in accordance with its own conditions. The dilemma of local medical societies, faced with 200 plans, reminds one medical writer of the story of the rural doctor who was treating a case of intractable illness. The patient became restive because of lack of favorable results and voiced her concern to the physician. He said, "My dear Madam, I have studied your case long and faithfully and have consulted many authorities. I find that there are 123 remedies that suit your case exactly. I have tried only 22 of them. Please be patient with me. We are bound sooner or later to reach one of them that will bring a favorable result."

IT IS REALLY unexpected to get any cheering news from one of the arch-advocates of compulsory health insurance, but the hat must come off to Mr. John A. Kingsbury, who declared in a fiery speech in Montreal on June 9 that his pet scheme was stopped at Washington by the "thousands of telegrams to the President and to Congress," by "personal influence on those in high

places" and by "publicity campaigns." Good! Now we know the effective methods to use, every one of them the rightful privilege of every American citizen. Keep them in mind for the next campaign.

DRUG ADDICTION in Egypt, it seems, has turned from the common narcotics to tea, which is boiled and reboiled to almost incredible strength, with devastating results. The physique of the fellahkeen addicts is reported deteriorating to the point where it takes eight to do the former work of four. If the habit spreads to this country, the narcotic squads will face a delicate dilemma. Just how long must the kettle boil before they raid the tea-party?

THE PRESIDENT of the Wisconsin State Medical Society calls upon the doctors of that State to help educate the public in what to do, and especially what not to do, in cases of motor accident. The tendency is to lift the victim about, perhaps bending and twisting him this way and that to put him in the car, and then bumping him over the roads forty or fifty miles to "get him home," or to the home-town hospital. A few weeks ago an elderly man was carted 80 miles in this manner with a fractured skull! He died in 12 hours. Internal injuries can easily be made fatal by the pulling and hauling of ignorant well-wishers. President O'Leary suggests that local medical societies make this a topic for addresses at luncheon clubs, radio talks, and newspaper health columns.

A NEW YORK DENTIST was amazed not long ago to receive a \$30 check in payment of a bill for \$20, with this explanation:

"When this debt was contracted, the country was still more or less on the gold standard . . . at least, the dollar had not depreciated to its present level. I think that to pay merely the amount of money specified on your bill would be pretty damned unfair; therefore, I hope you will accept the additional sum, and consider it in the light of (1) interest on the debt; (2) allowance for depreciation."

Can any of the medical brethren match that?

SPEAKING OF DENTISTS, it seems that formerly the contract dentist at West Point could not get his patients even to keep appointments, as he had no rank, standing, or authority. As related in *Dental Items of Interest*, he had the same status as a veterinarian, and the men kept their appointments or broke them as they chose. The staff at

humans. The optic nerves were about the size of the lead in an average pencil, while the olfactory nerves were fully three-quarters of the size of the pencil itself. No doubt this explains why the eyesight of bears is so poor in addition to the fact that their eyes are no larger than those of my Airedale dog which weighs about 60 pounds, and their scent so very keen. The areas in the nostrils of a bear sensitized by the olfactory nerve are 5 or 6 inches by $1\frac{1}{2}$ inch wide, while the sensitized areas in the human are approximately the size of the end of one's thumb in each nostril. The auditory nerve as it leaves the base of the brain is very large.

A few days later the guide had a narrow escape from another grizzly at a time when his loss would have left Dr. Towne alone in the wilds to almost certain death. Then on October 2, Dr. Towne and "J. B." took up their perch in the "nest" at 4:15 P.M. to await their luck, which arrived in 25 minutes. Says the doctor:

We discussed the probable avenues of approach that the bear might make and even looked through the telescope sight at imaginary bears feeding on the baits. It was difficult for me to hold the gun steadily in the position I was sitting without a gun rest. J. B., with his usual resourcefulness, suggested that he lie across my knees from his seat as we sat facing each other and that I use his back for my gun rest. We tried it and it worked well. J. B. was facing bait No. 1 and I was facing bait No. 2.

Everything was perfectly quiet when suddenly a huge bear came out of the woods and walked toward bait No. 2. The show was on at 4:40 P.M. He was so big that I at first thought it was a moose. He came into the meadow after zig-zagging about for a few minutes, and went to the bait and began looking and smelling it over. Finally he turned his left side to me, J. B. got into position across my knees and with a very careful aim, I gave him a 220 grain hollow point in the left shoulder. "King Solomon" took his dose and still remained standing. I reloaded and gave him another, this time in the neck just in front of the shoulder. He dropped instantly without making a sound, and, with a few mighty convulsive movements, was still. We remained in the nest until all signs of any respiration had ceased (we were watching through our telescope sight), and then we went to look over our prize.

"King Solomon" looked like the grandfather of all grizzly bears. He was simply huge. His hair was very dark, with the characteristic silver tip marking largely confined to his head and back. His sides, belly, and legs were black. We estimated his weight to be 1,000 pounds or more. The measurements as he lay upon the ground were: $10\frac{1}{2}$ inches between the ears, $18\frac{1}{2}$ inches from tip of nose to back of skull, 76 inches from tip of nose to tip of tail. His middle claws on each of his front feet were $3\frac{1}{4}$ inches long; width of front feet $6\frac{1}{2}$ inches; length of front feet 10 inches from heel to toe; length of hind feet 12 inches from heel to toe; width of hind feet $6\frac{1}{4}$ inches. The hide measurements were as follows: Length from tip of nose to

tip of tail 97 inches; width of hide between front legs from claw to claw 101 inches.

Schenectady County

THE SEMI-ANNUAL MEETING of the Schenectady County Medical Society was held on June 20 at the Shaker Ridge Country Club. Golf was played during the afternoon and dinner and entertainment were held at night. Dr. J. R. Schermerhorn was in charge of arrangements.

Tioga County

A SPECIAL MEETING of the Tioga County Medical Society in Owego on June 18 fixed a fee of \$2 for applications to practice under the new Workmen's Compensation Law, passed upon 24 applications, and authorized the Comitia Minora to act on future applications.

Westchester County

DR. JULIUS C. GRAY was chosen president of the New Rochelle Medical Society at the annual dinner meeting at the Wykagyl Country Club on June 17, succeeding Dr. F. Duncan Barnes. Others chosen were Dr. Sigurd C. Sandzen, vice-president; and Dr. Henry B. Wightman, secretary.

Entertainment was provided by the Society's orchestra, composed of Dr. Henry Margotta and Dr. Wallace, violins; Dr. Sydney L. Harris, piano; Dr. Bernard L. Toothaker, violin; Dr. August Beck, Dr. Leslie Burwell, mandolins; Dr. DePasquale, guitar; Dr. Gray, banjo, and Ned Burwell, traps.

In a golf tournament for a cup offered by Dr. Charles Ogilvy, Drs. Ralph M. DePasquale, Kenneth B. Wallace, and Morley T. Smith tied for first place with scores of 89. Dr. Smith won the toss and was presented the cup.

Second District

THE ANNUAL MEETING of the second district branch of the Medical Society will be held the third Thursday in November at the Garden City Hotel, Garden City. The date and place were set at a dinner-meeting of the district executives held at the St. George Hotel on May 27.

Dr. Carl Boettiger, president of the district, was in charge of the meeting. The presidents of the four county organizations, making up the second district branch, were present. They are Dr. Sturdivant Read, Kings; Dr. Morris Bender, Queens; Dr. George A. Newton, Nassau, and Dr. Wilbur C. Travis, Suffolk. Also present was Dr. Joseph Lawrence, executive member of the State Medical Society.

medical journal, which carried a notice saying that if any of the members failed to receive the magazine, it was because they had not paid their dues—recalling the father who mailed a check to his son at school, and added: "P. S. If you fail to get this, notify me at once." Another famous medical journal, in Chicago, warns its readers

of a swindler, and, in his description, says that he has "thin light hair and eyes." So we must watch out for anyone with thin light hair and eyes. All those with thick dark eyes are no doubt okay. It also appears that "several teeth are missing from his right lower jaw," so perhaps one doctor saw his duty and did it.

DR. WINSLOW'S MEDICAL BEGINNINGS

A seemingly well-informed writer in a home-town paper tells us that "a display of the dissected inner organs of a hog and a scholarly disquisition by a pathologist on the symptoms and diagnosis of the cholera that had caused the animal's death sent the man who is now president-elect of the Medical Society of the State of New York into his chosen profession." The writer is Henry W. Clune, who conducts a column called "Seen and Heard" in the Rochester *Democrat and Chronicle*. It appears that Dr. Floyd S. Winslow was a 10-year-old boy on his grandfather's farm in East Henrietta when his decision to practice medicine was made. Little Floyd wore homespun cast-offs and from his early youth the farm chores were given to his youthful hands. He was 10 when an epidemic of hog cholera decimated the hogs on the Winslow and several adjacent farms. Unable to check the spread of the disease or exactly to identify it, health officers sent for Dr. V. A. Moore, pathologist at Cornell University, who shortly arrived in Henrietta and performed autopsies on several of the diseased animals.

Young Floyd witnessed these operations from the barnyard fence. He was tremendously impressed both by the scholarly language of the visiting doctor and the respectful attention given to his words by a group of neighbors who had assembled to witness his experiments and listen to his report. Here was a man schooled in books and medicine who could tell these rough handed farmers what was wrong with their own livestock. If learning enabled a man to render this sort of service, Floyd decided that he would become a learned man. When Doctor Moore left, after ordering the hogs buried, their pens burned and establishing a quarantine on the affected farms, Floyd asked his mother about the visiting savant.

He had come, Mrs. Winslow explained, from Cornell University, a great institution in Ithaca where men were trained in the professions of law, engineering and medicine. She expressed the vague hope that Floyd some day might be a student there; and quickly attempted to stifle any false

hopes her words might have inspired by telling her son that poor farm boys had only a meager chance of ever entering such a place.

Floyd, however, already had made his decision. "When I grow up, I'm going to that college, Ma," he said. "I'm going to be a doctor like that man who cut up our hogs."

Mrs. Winslow shook her head sadly. That, she said, was a forlorn hope; she couldn't possibly afford to send her son to Cornell.

Her pessimistic words only temporarily discouraged the boy. The next day Floyd got a job with a neighboring farmer and returned at the end of the week with two silver dollars. This was the beginning of a fund that he nurtured and added to over the subsequent years and which in time helped to finance his medical education. Nearly 20 years later he entered Cornell and in time studied pathology under Doctor Moore, the professor who had given him his first inspiration to study medicine.

But before his matriculation in the medical school, he worked at various jobs, and for two years taught in the brick school-house in Henrietta which he had attended as a youth. After being graduated from Cornell, he served his internship in the General Hospital, and later opened an office in the house in Plymouth Avenue South in which he still resides and practices.

In those days the leading medical man in that section was the late Dr. James P. Brady, whose office in Plymouth Avenue was only two blocks from Doctor Winslow's. Desiring to cultivate the favor of this veteran physician, Doctor Winslow one day called Doctor Brady as consultant in a case that had given the younger man considerable concern.

A bluff but kindly man, with a great wit, Doctor Brady peered over his glasses at the patient with a mumbled, "Hm-m, I see." Then he turned abruptly to his youthful colleague, "Well, so far you haven't done any harm," he said; and he bent over the patient and began his stethoscopic examination.

Books

REVIEWED

Institutional Care of Mental Patients in the United States. By John Maurice Grimes, M.D. Octavo of 138 pages. Chicago, J. M. Grimes [c.1934]. Cloth, \$3.00.

The subject matter of this book represents the results of a two-year survey by means of questionnaires and personal visits to the institutions for mental cases in the United States. The study purports to be the outgrowth of a resolution adopted by the House of Delegates of the American Medical Association at its Detroit meeting in June, 1930, and was carried on by the Council on Medical Education and Hospitals. Owing to an unfortunate difference of opinion as to how this report should be published, it finally fell to the lot of the author to do it on his own responsibility, and this volume is the result.

The report covers the publicly owned institutions and the privately owned and controlled institutions. Of the public institutions, the State hospitals and Federal hospitals occupy outstanding positions and many of them seem to be leading the way in scientific research related to the care and treatment of mental disease. Many of the State hospitals are the outgrowth of the old asylum and, while some have made long strides and are shining lights, others in various parts of the country would seem to be better as asylums.

Those who are interested in the development of the State hospital may take encouragement or not from this report, depending upon what the standing is of those institutions in which they are interested. Greater effort should be made in some instances to advance the methods of care and treatment, and this comparison should serve as a stimulus. The Federal institutions are shown to be outstanding examples of what is good, and they are unstintingly equipped to do as good work as possible. What city and county institutions still remain in the country suffer by comparison. The privately owned and controlled institutions represent those controlled by individuals, partnerships, societies or associations. Of these, the private sanitarium and the private endowed hospital are most conspicuous for the good work carried on. Many of the profitable private sanitariums are very well equipped and managed but the private endowed hospital unlike the others, is often liberally enough supported so that it is not obliged to depend upon

income from patients, and its scope of activity is therefore much wider.

The author makes some interesting recommendations based on his findings: an effort to increase the number on parole, with a resulting saving of funds which could be used to finance improvements; amplification of hospital atmosphere, with a reduction of continued treatment cases to a minimum, and for those intensive efforts at rehabilitation.

The findings should be, in general, quite helpful. Some readers may feel encouraged with the program they are following. Others should see the need for radical changes in an effort to improve conditions. In these particulars, this book should be a stimulus.

A. E. SOPER

Aids to Operative Surgery. By Cecil P. G. Wakeley, F.R.C.S. Second Edition. 16mo. of 225 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.25.

This is a second edition of a pocket-compendium of operative surgery, which was originally published about 14 years ago by H. C. Orrin.

The text is brief and concise as have been other volumes in this series of "Aids." There are about 225 pages including index. Three illustrations show the points of arterial ligation in the upper and lower extremities. The operative measures discussed are taken according to the systems and structures of the body, the first chapter being upon the Blood Vessels and the last chapter upon the Spine.

This volume is a valuable adjunct to the student who is preparing himself for an examination on this subject.

HERBERT T. WIKLE

Essentials of Histology. Descriptive and Practical for the Use of Students. By Sir E. Sharpey-Schafer. Thirteenth Edition. Edited by H. M. Carleton, B.Sc. Octavo of 618 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$5.00.

A comprehensive volume for the student, revised because of the addition of recent theories on blood formation and ossification, this simple reference book will be considered helpful to the graduate practitioner for its brevity.

NATHAN REIBSTEIN

THORACIC INJURIESJ. V. BOHRER, M.D., *New York City*

In the past, thoracic injuries have formed a minor part of traumatic surgery, protected as are the intrathoracic viscera by the thoracic cage. However, with modern speed machines used for travel and for industry, the thoracic cage no longer affords such a protection to the deeper structures.

These injuries naturally fall into three classifications: (1) Those involving structures external to the thoracic cage; (2) those involving the superficial parts as well as the deeper structures; and (3) those involving injuries to the thoracic cage.

Injuries External to the Thoracic Cage

These injuries are of the least importance. They consist of stab and gunshot wounds, contusions, and abrasions. They may result in loss of tissue, infections, and so on, which may require considerable care but will ultimately heal. The lesions of considerable importance caused by stab or gunshot wounds, and which are often overlooked, occur in the upper anterior chest; i.e., wounds involving the brachial plexus or, more commonly, involving the subclavian vein and artery. The following case will illustrate:

R. M., a negro boy of 26, was admitted to Knickerbocker Hospital for a stab wound of the right upper anterior chest wall. He neither knew the type of weapon used nor how far it was inserted. His one complaint was severe bleeding from the wound. On examination, an insignificant stab wound one-half inch long was found in the mid-portion of the right pectoral muscles. The direction of the wound could not be established. A clot of blood could be seen corking the wound and only a serous discharge was found on the dressing. Nerve injury was

readily excluded and a pneumothorax was ruled out by physical and x-ray examination. The patient was kept in bed three days and then discharged cured. Within two weeks he returned to the Out-Patient Department complaining of swelling and weakness of the right hand. He was seen by an associate surgeon who made a painstaking examination, with the following findings: a swollen right hand, a wrist drop, a swelling below the right clavicle, and on auscultation, a definite bruit. A diagnosis of arteriovenous aneurysm was made and the patient readmitted to the hospital.

These lesions are easily overlooked, both in their incipient stage, when they appear to be insignificant, and in the later stages when there is a large, hard, indurated hematoma. One is apt to think it is due to infection (which might readily complicate the real lesion): That an aneurysm of the subclavian artery is a serious condition needs no comment.

Infected stab wounds of the costal cartilage are the second extrathoracic cage injuries of real importance. Moschowitz¹ has shown that if a cartilage becomes infected it is necessary to remove the entire cartilages on the involved side to eradicate the disease. Several such cases have been admitted to the hospital, and in each instance, removal of the costal cartilages on the side involved was necessary to effect a cure. The following case illustrates this condition:

A patient, P. Q., admitted to Bellevue Hospital, March, 1934, gave a history of having been stabbed by a paring knife in the region of the fourth costal cartilage one year prior to admission. The wound had never healed. On examination an insignificant sinus with serous discharge was found

over the fourth left costal cartilage; the cartilage could be felt by probing. At operation, the sinus was followed to and under the fourth cartilage, and here a bed of soft pale granulation tissue was found. Because of the tendency of this to extend, not only were the entire cartilage and perichondrium removed, but the third and fifth cartilages were also completely removed. The operation was terminated at this point because the patient's condition did not warrant removal of the remaining cartilages. A pedicle of the pectoralis major muscle was placed in the upper portion of the wound made by resecting the cartilages, and the skin partially closed with adequate drainage. After three months, more cartilages were removed as the disease had extended to the lower ones.

However, in a boy of ten years who had a nontraumatic, nonsuppurative tuberculoma over the third left costal cartilage that had caused a pathological fracture of this cartilage, a complete resection of the tumor, including the skin and costal cartilage down to the pleura, resulted in a complete cure.

The only other extrathoracic cage injury that might involve important structures is found between the spinal column and the posterior angle of the rib. In this area the intercostal nerve leaves its covering beneath the lower edge of the rib and lies unprotected in the intercostal space. Admittedly, in this region a nerve might be divided. The upper nerves, if divided, would cause little disturbance; the lower, from the sixth down, would cause paralysis of the anterior abdominal muscles.

Injuries Involving the Deeper As Well As the Superficial Structures

These injuries are caused both by blunt force and by penetration. Most commonly, penetrating wounds are caused by stabbing or gunshot, depending largely upon national customs (the Italian is more likely to stab, the American to shoot). Industrial and automobile accidents present either or both blunt and penetrating injuries. These injuries involving the intrathoracic structures may threaten life, not only from immediate cardiac inhibition, shock or hemorrhage, but also as a result of mechanical interference with vital respiration or circulation. The degree of shock caused by these injuries is one, but attention is

called to a phenomenon which may cause one to underestimate the seriousness of the condition when there is an accompanying intrathoracic injury. In a case having a temporary vagus stimulation, e.g., the pulse at first will be slow and full, giving a false impression which leads one to believe it to be a minor injury. Report of such a case follows:

A patient was recently admitted to Knickerbocker Hospital. An automobile accident resulted in three persons being brought to the hospital by ambulance. Two had serious head and face injuries and were promptly treated for shock. The third, whose pulse was slow and of good volume, and who was able to give a detailed report of the accident, was considered by the house surgeon as suffering from a minor injury. He was much surprised to be called in three hours and told that this patient was in extreme shock, from which he did not recover.

Autopsy: contusion to chest and serious head injury, which was the real cause of death.

Hemothorax. Hemorrhage into the pleural cavity may be caused by any type of injury, usually, however, by a penetrating wound. In younger individuals it may be caused by rupture of a large vessel or tearing of the lung from a crushing injury, leaving no external evidence of trauma. Commonly, this is caused by an automobile equipped with semi-inflated tires passing over the thorax, the thoracic cage being sufficiently resilient to snap back into normal position with no damage to it.

There are several factors which promote bleeding and prevent cessation by clotting, as in other parts of the body: (1) The negative intrapleural pressure which tends to aspirate the blood from the vessels; (2) the respiratory movements, especially on coughing; (3) the ease with which the lung is compressed; (4) the fact that the blood-clotting time is delayed in the pleural cavity.

Owing to these factors, a huge hemothorax may develop from a comparatively small vessel. Indeed, death has occurred in a man whose intercostal artery was cut by a friendly thrust of his wife's paring knife. The wound was insignificant, and the man a robust individual who showed no shock on admission to Knickerbocker Hospital. A diagnosis of hemothorax was made and he was treated

conservatively. Autopsy failed to show any other lesion than a huge hemothorax from a severed intercostal artery.

Traumatic Pneumothorax. This type is characterized by the presence of air in the free pleural cavity, as a result of a penetrating wound that has allowed air to enter. The condition may also result from a rupture of the lung allowing the escape of air into the pleural space. In the latter instance, a tension pneumothorax may develop. As the lung partially collapses it may form a valve action at the leaking area, allowing ingress without egress the act of respiration raising and lowering the intrabronchial air pressure and actually pumping the air into the pleural cavity. Thus a vicious cycle is established. As the mediastinum is displaced and compresses the contralateral lung, greater efforts at inspiration are made and a greater amount of air is forced into the pneumothorax.

In one such case under observation in Bellevue Hospital the manometric reading showed a positive reading of 25 cm. of water. 1800 cc. of air were removed by means of a pneumothorax apparatus giving only temporary relief after which the pressure became so high that life was greatly endangered. A simple intercostal thoracotomy was then done and a "flapper tube" introduced (an ordinary tube with a finger cot lipped over the external end working as a ball valve allowing exit but not entrance of air with respiration). Complete recovery resulted in this case.

A second case that of a middle aged woman admitted to Knickerbocker Hospital with a spontaneous tension pneumothorax was not recognized as such; she became cyanosed and died within 24 hours.

Tension pneumothorax, whether spontaneous or traumatic is essentially the same type of lesion, however, in the traumatic variety there is likely to be a greater laceration of lung tissue which requires thoracotomy with suture of the lung wound.

Hemopneumothorax. This is the most common result of a penetrating wound the air either entering through the stab wound, or from a wound in the lung, the bleeding occurring from the internal mammary or intercostal vessels or from the portal circulatory system.

Traumatic Empyema Thoracis. The literature on this subject reveals a marked

difference of opinion. All writers consider it a serious condition since the lung is usually collapsed and the resulting empyema is a generalized one as compared with the more common postpneumonic empyema. Boland² states that during the past ten years he has had under observation 750 cases of penetrating wounds of the chest. In this series only twelve cases of empyema developed, with one death and only one pulmonary abscess. He emphasizes the fact that wounds sustained in other parts of the body at the same time became infected, whereas those involving the pleural cavity did not. He concludes that the pleura must be endowed with greater power to resist infection than had been believed in the past.

On the contrary, Hedblom³ states "Empyema is a frequent complication of thoracic injury." Earlier statistics give the incidence of empyema as high as 25 per cent. Duff,⁴ in a recent article reports 32 cases of penetrating thoracic wounds with but one case complicated by empyema. Foster, Jr. and Prey,⁵ in their conclusions, state the danger of septic complications following the chest injuries in civil practice has been over emphasized in the past. Sandison⁶ and Elkin report three cases of empyema in their series of 100 cases of intrathoracic injuries.

It has been the author's observation in both Knickerbocker Hospital and the Fourth Division Bellevue Hospital that the incidence of empyema as a complication of thoracic injuries is very infrequent, however, when it does occur, it is much more serious than a postpneumonic empyema.

Dolley,⁷ in a recent article on chest injuries, speaks of an acute pleuritis, and compares it to an acute peritonitis in its rapidity of development and its severity of general symptoms. He describes it as an acute pleural phlegmon. Though the author has never observed such a process, he can understand how it might occur, especially if the infecting organism is a streptococcus.

Lung abscess occurs occasionally from penetrating wounds where the lung is primarily involved, especially when penetrated by foreign bodies. Abscesses have been reported following retained bullets, splinters of wood, pieces of splintered rib, and so on. Small subcortical abscesses,

which eventually rupture into the pleural cavity, are undoubtedly responsible for the development of empyema as a later manifestation.

Rupture of the Diaphragm. This may be due to blunt trauma to the chest or abdomen, or both, causing a bursting tear in the diaphragm, or it may be due to penetrating wounds, either gunshot or stab.

Hedblom³ reports a series of 857 cases of diaphragmatic hernia in which 51 per cent were due to trauma. It is an exceedingly serious condition, especially if not diagnosed and operatively repaired at once. In penetrating wounds of the lower thorax, and indeed even in higher ones, trauma to the diaphragm must always be considered. Those on the left side are more serious as the abdominal viscera are more likely to be injured or herniated into the pleural cavity. On the right side, the liver will usually completely tampon the diaphragmatic wound and prevent eventration of the abdominal viscera, although this may occur. The author operated upon such a case several years after injury, and found eventration of the omentum.

Some interesting cases of diaphragmatic hernia have been reported.

A patient was admitted to Knickerbocker Hospital in 1930. He was operated and reported by Dr. Ellsworth Eliot, Jr.⁸ In his history the patient stated that he received a bayonet wound in the left lower, posterior thorax. It apparently caused neither thoracic nor abdominal complications, and healed promptly. (The following is quoted in part from Dr. Eliot's report.) "At operation the swelling, separated from its adjacent tissue, disclosed a well-defined pedicle emerging through an opening in the tenth intercostal space. The sac consisted of well-defined connective tissue, without the glistening appearance common to either the pleura or peritoneum." The sac contained omentum. It was amputated and the pedicle returned to the peritoneal cavity through the opening in the diaphragm. The pleural cavity was not invaded by the hernia, nor was it opened during the operative procedure. This hernia was called "transthoracic abdominal hernia."

Lehman⁹ also reported a transthoracic abdominal hernia occurring five years after the opening of a subdiaphragmatic abscess. Connors and Stenbuck¹⁰ reported a case with a stab wound an inch above

the left nipple line. The diaphragm showed a laceration one and one-half inches long through which the stomach had eventrated. The protruding portion became gangrenous and ruptured, discharging its contents into the pleural cavity. Speed¹¹ reported a fecal fistula of the transverse colon, the colon having passed through a rent in the diaphragm and presented in the seventh interspace near the posterior axillary line (side not mentioned). Parsons¹² reports a gastropleuro-cutaneous fistula following a gunshot wound.

Hemopericardium. Stab wounds and gunshot wounds of the heart, while occurring frequently, will only be mentioned as the subject is too lengthy to be discussed in this paper. Suffice it to say, they are acute surgical emergencies.

Chylothorax. Though a rare condition, it deserves mention in connection with chest wounds. In a recent excellent article Macnab and Scarlett¹³ report one very interesting case and have collected 32 others from the literature that were caused by direct injury. The condition was first described by Bartolet in 1633.¹⁴ However, the first authoritative case, according to these writers, was reported by Quinke in 1875.¹⁵

The particular points of interest are: (1) The latent period following the injury before the symptoms of thoracic disturbance occur. Apparently the duct may be injured and the chyle collect extrapleurally, eventually rupturing into the virgin pleural cavity and causing severe collapse. (2) Huge amounts of chyle have been removed from the pleural cavity. In the case of Macnab and Scarlett,¹³ 35 liters were removed in the course of 48 days.

In Dietze's¹⁶ case, 27 liters were removed in 31 days. Hahn¹⁷ aspirated 29 liters during the life of his patient and seven liters at autopsy.

The prognosis of traumatic chylothorax is unquestionably grave. Apparently, if there is a single thoracic duct and it is completely severed, recovery is impossible. If, on the contrary, as often occurs, there are collaterals and not all are severed, recovery may take place. The recorded mortality in traumatic chylothorax, as reported by Macnab and Scarlett,¹³ is about 50 per cent.

The cause of death is the rapid accumulation of large amounts of fluid after aspiration, and progressive cachexia, even though the patient is given a sustaining diet of protein and carbohydrate food, and even though the chyle is injected into the blood by venoclysis.

Hemomediastinum. Especially in children, this may occur as a result of thoracic compression. If the great vessels are involved, prompt death is inevitable. Smaller vessels may result in huge hematoma. The following case illustrates this condition:

E. Z., a boy of ten, was admitted to Bellevue Hospital in 1926. He was crushed between two automobiles. There was severe mediastinal pain, though there was no injury to the thoracic cage, nor any external evidence of trauma. On physical, and especially fluoroscopic examination, the mediastinum was found to bulge into both pleural spaces; neither space, however, contained blood. Expectant treatment resulted in a cure.

Prolapse of a portion or lobe of a lung may take place where there is a lacerated chest wall combined with compression of the thorax, or severe coughing following the injury. It is essentially a rare condition, interesting though is the fact that Rolandus¹⁸ in 1499 performed a successful lobectomy on such a herniated or prolapsed lobe, and a similar procedure is credited to Tulp¹⁹ in 1624.

Subcutaneous and Interstitial Emphysema. This is a common condition following injuries of the chest caused by escape of air into the tissues. It is usually confined to a limited area in the region of the wound. In such cases, it is only of academic interest and needs no treatment. At times, however, the interstitial emphysema comes on rapidly, invades various tissue planes, and extends over the entire body. It causes great discomfort and may produce alarming symptoms. The severe forms are caused either by a rupture of the trachea or large bronchus, or where there is a rent in the parietal pleura in conjunction with a tension pneumothorax.

A case of very extensive interstitial and subcutaneous emphysema was admitted to Knickerbocker Hospital and reported by Douglas and Morton.²⁰ The patient had a chest injury and when seen a few minutes after the trauma his eyes were closed and

the neck and trunk markedly distended by interstitial emphysema. This process continued until the scrotum and legs, in fact, the entire body, became markedly distended.

Rupture of the trachea or large bronchus has been reported due to accidental trauma, surgical trauma by the passing of a bronchoscope, and so-called spontaneous rupture. It causes a rapid inflation of the tissues and is usually fatal. The author has observed two such cases. The first, a girl of 20, had rapidly developing subcutaneous and interstitial emphysema, which proved fatal in a few hours. The second, a boy of 12, who developed only slight emphysema but who did develop a suppurative mediastinitis and right suppurative pleurisy.

Compression Cyanosis or Asphyxia. This is a rare condition and is mentioned only as such. It is caused by crushing injuries of the chest associated with compression. The blood is apparently forced into the superior vena cava, producing a severe back pressure into the veins of the head, face, neck, and thorax. The conjunctivae become a brilliant red, the skin of the involved area has the appearance of a severe cyanosis and this color area has a sharp line of demarcation. The color is due to small, closely packed ecchymotic spots. The author has had the privilege of seeing only one patient suffering from this condition; it was during internship in Bellevue Hospital, when a laborer was admitted to the ward giving a history of momentary compression of his chest. He was cyanosed from his head to a sharp line of demarcation just above the belt line. This cyanosis gave him the appearance, from a distance, of a colored man. He suffered no particular pain and had no dyspnea or circulatory disturbance. He was kept in the ward largely on account of his curious and interesting condition. Gradually the color disappeared and the patient was discharged cured.

Injuries Involving the Thoracic Cage

Fracture of Rib. This occurs frequently and causes painful respiration and tenderness over the involved ribs. Multiple ribs may be fractured, especially during adult life, when the chest is struck by a large, blunt body, or when the individual is

thrown violently against a flat surface. In one such case, a man of 60 was thrown violently against a boat pillar during a severe storm at sea. The second to the seventh ribs inclusively were broken, and a pneumothorax resulted. Bed rest, without immobilization by strapping, resulted in prompt recovery.

Ununited fracture of a rib is a rare curiosity. If painful, liberal rib resection will promptly relieve the pain and cure the condition. Comminuted fractures of the rib occur and free fragments sometimes enter the lung. Such fragments may be the cause of lung abscesses, as may retained bullets or any foreign substance.

Fracture of the Sternum. This is relatively uncommon, yet in modern industry and especially in automobile accidents where the driver is forcibly thrown forward striking his chest on the steering wheel, fracture of the sternum has been noted. Two protocols are in our files:

First case, that of a driver whose car struck head-on, the impact throwing him forward against the steering wheel. This impact produced a fracture of the sternum with immediate cessation of circulation. Only slight hemorrhage was found in the mediastinum.

Second case, that of a passenger who was forcibly thrown forward in a head-on collision. When removed from the car he was unconscious, from which state he did not recover. Due largely to his unconscious condition, and also to his slow pulse (vagus stimulation), he was thought to be suffering from a fractured skull. He died within 24 hours and autopsy revealed a fracture of the sternum with the broken fragment rotated at a right angle, a small tear in the arch of the aorta, and a hemomediastinum.

Diagnosis

Exact diagnosis is assuming a major rôle in chest injuries. Fractured ribs, hemothorax, and hemopneumothorax are usually obvious. The question involved in a differential diagnosis is the part played by shock, severity of hemorrhage, whether it is arrested or progressive, simple pneumothorax, or a progressive tension pneumothorax, trauma to the lung or heart, and especially to the diaphragm.

Treatment must start at once. The urgent cases such as tamponage of the heart, or severe loss of blood from a hilar vessel, must be taken directly to the oper-

ating room. Those of lesser severity should be put to bed and not moved, at least not until an evaluation of the injury has been made. A goodly dose of morphine should be given at once as its beneficial effect in thoracic injuries is frequently astonishing. A portable x-ray film must be secured at the earliest possible convenience and repeated in two to four hours. Blood typing, even in seemingly minor injuries, is indicated.

If hemothysis occurs, raising the foot of the bed will facilitate emptying the bronchi of blood. If a tense hemothorax is present, immediate aspiration of blood is indicated, with an equivalent air replacement. This, however, is usually not necessary and should be deferred from three to four days. If, after careful observation, the unfavorable symptoms abate, or even are not progressive, and laceration of the diaphragm can be reasonably excluded, expectant treatment should continue. The patient should be placed with the wound dependent, as suggested by Allen.²¹ This will be beneficial by promoting slow seepage through the wound with a resultant decompression of the hemothorax, and will further promote easier and better respiration in the contralateral lung. If bleeding is from the intercostal vessel, or indeed from the internal mammary vessels, these must be ligated, and the site of the wound will indicate where the incision must be made. Both stoma of a severed internal mammary vessel must be ligated, due to its free collateral anastomosis. If, however, laceration of the diaphragm, or slow tamponage of the heart is diagnosed, or if pressure symptoms and dyspnea increase, or the pulse becomes smaller and faster, or pallor or cyanosis become more marked, immediate exploration is imperative.

A long intercostal incision in the sixth or seventh interspace, extending from the costal cartilage to the posterior angle of the rib, gives a satisfactory exploratory incision for practically all thoracic injuries. It truly is a general utility incision. If more room must be had either upward or downward or both, ribs may be divided transversely near the posterior angle, or anteriorly, or both. Through such an incision, any part of the pleural cavity can be satisfactorily inspected and the neces-

sary operative work done. A Lilienthal rib spreader and a Cameron light will be helpful armamentaria in such an exploration. This incision has the advantage of being quickly made and easily and satisfactorily closed. (It should be closed with three or four double, medium-sized chromic sutures placed pericostally.) If profuse hemorrhage is found, a tourniquet may be placed about the hilum and drawn sufficiently taut to control the bleeding without doing damage to the structures. A Shenstone snare is useful for this purpose. It stops hemorrhage and, at the same time, gives the operator an excellent handle with which to make a gentle traction on the mediastinum, and thereby prevent the dreaded mediastinal flutter. It further gives the surgeon an opportunity to thoroughly explore and properly repair any serious lung lesion.

The method devised by Connors¹⁰ and his associates of exteriorizing lung wounds when in the periphery of the lung, and especially so if infection is suspected, is an excellent one. It is thoroughly physiological and surgical.

The principle of exteriorizing the lung for laceration or using a portion of the lung for tamponing a rent in the pleura, accidental or otherwise, is an excellent one. We have used the latter in several instances. On one occasion, while resecting a costal cartilage, the thin retrocartilage pleura was inadvertently penetrated. A finger was immediately introduced in the rent as a temporary tampon, while an assistant finished the removal of the piece of cartilage. A sponge forceps was introduced along the side of the finger and a portion of the lung readily pulled into the rent and fixed there with two stitches. It completely closed the pleura and caused no immediate or remote disturbance.

The author has also used this principle when a deliberate rent was made in the pleura in order to introduce an exploratory finger to locate the exact spot of an adherent lung abscess. This adherent lung was beneath the scapula and could not be more accurately localized by the use of the x ray. The rent was closed by a small portion of lung used as a tampon, and a secondary operation successfully drained the abscess.

The procedure when the thorax has

been opened is given below as follows:

(1) All bleeding should be stopped preferably by ligation or suture. Packing in the thorax for bleeding is less satisfactory than in external wounds, due to the compressibility of the lung and to the constant respiratory movements.

(2) Wounds in the diaphragm should be enlarged and subdiaphragmatic viscera carefully examined and repaired. If difficulty is encountered when repairing the diaphragm it may be temporarily paralyzed by crushing the phrenic nerve as it passes over the lateral surface of the mediastinum.

(3) Foreign bodies lodged in the lung should be removed. They are usually easily palpated and while emergency operation is not advised for their removal, if the lung has been exposed and the condition of the patient will permit, it is advantageous to remove all foreign bodies.

(4) All blood and blood clots should be removed.

(5) In a gunshot wound of the lung, both entrance and exit should be found. Lacerated lung wounds should be smoothed by cutting away the torn portion, large vessels and bronchi ligated, and the lung wound sutured or exteriorized.

(6) Massive gangrene (usually fatal before operation) theoretically should be treated by placing a tourniquet about the hilum sufficiently taut to obstruct both arteries and veins and allow the lung to spontaneously separate.

(7) If a lung abscess is encountered and is not adherent to parietal pleura, exteriorization would be the treatment of choice with secondary evacuation.

Prolapse of a lobe or portion of lung, if not lacerated, should be cleansed and gently deflated and returned to the pleural cavity with immediate closure of the resulting sucking wound. If lacerated, the lacerated portion should be completely or partially exteriorized.

Unabsorbed blood should be aspirated and blood clots removed by thoracotomy. Subcutaneous emphysema, if extensive, should be drained by multiple incisions. If the air is being pumped into the tissue rapidly from a torn trachea or large bronchus, an incision over the supra-

sternal notch should be made and blunt dissection continued in order to drain the anterior mediastinum of air.

A large majority of wounds are best

treated expectantly, a few are urgent emergencies, and the remainder are operative only after careful study.

116 EAST 58TH STREET

References

1. Moschcowitz, A. V.: Treatment of Diseases of the Costal Cartilages, *Annals of Surg.* 68:168, 1918.
2. Boland, F. K.: Cited by Eliot (Ref. 8).
3. Hedblom, C. A.: Thoracic Injuries, *Surg., Gynecol. & Obst.* 58:503, 1934.
4. Duff, P. H.: Penetrating Wounds of the Chest in Civil Life, *Texas State Jour. Med.* 29:438, 1933.
5. Foster, J. M., and Prey, D.: The Treatment of Acute Traumatic Hemothorax, *Annals of Surg.* 100:422, 1934.
6. Sandison, J. C., and Elkin, D. C.: Penetrating Wounds of the Chest, *Jour. Thoracic Surg.* 2:453, 1933.
7. Dolley, F. S.: Diagnosis and Treatment of Chest Injuries, *Western Jour. Surg., Obst., & Gynecol.* 39:267, 1931.
8. Eliot, E. Jr.: Transthoracic Abdominal Hernia, *Annals of Surg.* 98:581, 1933.
9. Lehman, E. P.: Cited by Eliot (Ref. 8).
10. Connors, J. F., and Stenbuck, J. B.: Penetrating Stab Wounds and Bullet Wounds of the Chest, *Annals of Surg.*, 97:528, 1933.
11. Speed, K.: Cited by Eliot (Ref. 8).
12. Parsons, W. H., and Weston, W. G.: Gastro-Pleuro-Cutaneous Fistula Following Gunshot Wound, *Amer. Jour. of Surg.*, 21:458, 1933.
13. Macnab, D. S., and Scarlett, E. P.: Traumatic Chylothorax Due to Intrathoracic Rupture. *Canadian Med. Assoc. Jour.* 27:29, 1932.
14. Bartolet: Cited by Macnab and Scarlett (Ref. 13).
15. Quincke: *Deut. Arch. f. klin. Med.* 16:121, 1875.
16. Dietze: Cited by Macnab and Scarlett (Ref. 13).
17. Hahn: Cited by Macnab and Scarlett (Ref. 13).
18. Rolandus: Cited by Paget, Stephen; *Surgery of the Chest*, 1896.
19. Tulpius: Cited by Paget, Stephen; *Surgery of the Chest*, 1896.
20. Douglas, J., and Morton, P. C.: Traumatic Emphysema, *Annals of Surg.* 88:633, 1928.
21. Allen, D. S.: Treatment for Penetrating Wounds of the Pleural Cavity, *Arch. Surg.*, 21:1161, 1930.
22. Binney, H.: Acute and Traumatic Lesions of the Chest, *New England Jour. of Med.*, 205:610, 1931.
23. Rees, W. A.: *Brit. Med. Jour.* 1:16, 1934.
24. Adams, W. E., and Livingstone, H. M.: Closing the Bronchial Stump in Pulmonary Surgery, *Annals of Surgery*, 95:106, 1932.
25. Head, J.: Injuries of the Head, *Arch. of Surg.* 25:601, 1932.

VOLUNTARY HOSPITALS HIT

Last year 103 hospitals had to close their doors for lack of funds with which to carry on, says a correspondent of the *New York Times*. He adds that in 1928 we had 6,825 registered institutions; but in the five years that followed 388 of them were forced out of service. Adding the loss for 1934, we find that in six years nearly 500 hospitals were driven to the wall. This year several hundred others are in a precarious condition, hoping against hope that they will be able to carry on until the coming of better times lightens the pressure upon them.

The institutions which had to shut up shop were voluntary hospitals, that is to say, those that were supported by private charity and not by any governmental agency. The importance of the work of these institutions may be measured by the fact that in 1934 they admitted very nearly 5,000,000 patients, as against something over 2,000,000 cared for in the tax-supported hospitals. Even in this field government competes disastrously with private undertakings, for last year, while the bed capacity of the volun-

tary hospitals was decreasing by more than 5,000, that of tax-supported institutions increased by well over 23,000. In the privately run institutions half the beds were vacant, while in the tax-supported hospitals seven out of every eight were occupied.

A motion picture entitled "Around the Clock with You and Your Baby" for use in educating mothers in the care of the newborn, has been produced by the department of obstetrics and gynecology of the University of Southern California, says *The Journal of the Indiana State Medical Association*. There are three reels of 35 mm. film, requiring about thirty-five minutes, and it may be borrowed without charge by any ethical hospital if shown at least twice a week and if a report of the number of showings and number of persons who saw the film is made. Information concerning the film may be had by writing Dr. Tollefson, 511 South Bonnie Brae Street, Los Angeles.

THE SIGNIFICANCE OF LABORATORY TESTS AND METHODS

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Before proceeding to a discussion of the significance of laboratory tests, it will be worth while to consider for a moment the place that the laboratory holds in medicine and the influence which it is exerting upon medical practice. Its position is admittedly dominating. The science of pathological anatomy is the one firm foundation upon which can be built an accurate knowledge of disease. Practically all of the worth-while developments in the diagnosis, prevention, and specific treatment of the large group of the infectious diseases have arisen from the laboratory. To the minds of both the layman and the scientist, the most thrilling discoveries are those of the laboratory. Furthermore, in recent years the press has discovered the activities of the laboratory and has done much to surround them with an atmosphere of mysterious omnipotence and to dramatize their successes. Even within the profession the rapid succession of so-called discoveries and their technical discussion has bewildered many clinicians who, not fully understanding, have developed more or less of an inferiority complex on the subject.

In consequence, we find a tendency to exalt unduly the importance of the laboratory, the *science* of medicine, if you please, at the expense of the *art* of medicine. This has progressed so far that one writer has actually charged that during the last decade "clinicians have forgotten to use their own powers of observation, and have made use of the laboratory, even to a ridiculous extent." Were this charge wholly true it would be entirely distressing. Fortunately, there exists in the profession an encouraging proportion who have been inspired to practice the art of their profession. Furthermore, the influence of the medical schools is being largely used to encourage a swing of the pendulum back to those methods of our predecessors that

are more rational and more successful in this respect. When, now and again, we hear of some practitioner who has become famed for his diagnostic acumen and his successful treatment, we are likely to find that he is a member of this group. We are also likely to find that he uses both drugs and laboratory examinations sparingly but effectively.

There are, of course, certain laboratory examinations that are indispensable. You can find out the blood group of a patient for instance, in no other way. Other examinations may be helpful or confirmatory or merely dictated by custom. We may ask what are the reasons for asking for laboratory examinations. The laboratory may be called upon in order to aid in establishing a diagnosis, or to confirm a diagnosis already made or strongly suspected. It is in this field that unnecessary examinations may be most markedly restricted if the patient receives careful and thorough clinical consideration before the laboratory is appealed to, and may be extensively ordered if the clinician has a tendency to wait until he hears from the laboratory before he attempts to make his diagnosis. I think it may fairly be said that the greater the diagnostic ability of the physician, the less likely he is to request the performance of tests that prove to be unnecessary.

A properly conducted laboratory can greatly influence the practice of the clinician in this respect by means of discussions and experiments. By tabulation of its findings and determination of the percentage of negative results, there may be formed an estimate of the care that is being exercised in calling for examinations. If the percentage of negative results is too high, it is probable that too many tests are being asked for. If they are too low, then too few are being required and it is possible that some positive cases are being overlooked. Some years ago at the New York Hospital, we

From the Central Laboratories and the Department of Applied Pathology and Bacteriology of the New York Hospital—Cornell Medical College Association. Read as one of the lectures in a postgraduate course arranged by the Committee on Public Health and Medical Education of the Medical Society of the State of New York before the County Societies of the Counties of Cortland, Franklin, Jefferson, Montgomery, and St. Lawrence, season 1934-1935.

conducted such an experiment with one of the clinical services. On this service it had been the practice to take blood for a Wassermann reaction only when there seemed to be some clinical indication for the test. For one year, however, this test was made a routine procedure for all patients admitted to that service. The results of this survey were illuminating.

1922	238 tests	10 (4.2%)	strongly positive
1923	234 tests	13 (5.5%)	strongly positive
1924	784 tests	13 (1.6%)	strongly positive
1925	306 tests	19 (6.2%)	strongly positive

These figures are perhaps not very large but they seem definitely to indicate that on this particular service the clinicians were recognizing or suspecting practically all the instances of syphilis that came to their attention, really a remarkable accomplishment. On another service, on the other hand, in which the idea of "routine" gradually developed, during eight years the number of Wassermans increased from 146 to 1,021, or about seven fold, while the number of strongly positive tests increased from 8 to 28, only $3\frac{1}{2}$ times. Furthermore, the actual number of positive results was about the same during each of the last three years of this period although the total number of tests continued to increase.

The laboratory is also asked to carry out examinations whose results are expected to inform the physician of the progress of a disease that has already been recognized. Thus repeated estimations of the blood sugar are of value in the management of diabetes mellitus and few would be willing to engage in the treatment of syphilis without being able to have frequent Wassermann or flocculation tests performed. Here, there is comparatively little occasion for the unnecessary. One man may ask for more frequent examinations than another, often depending upon the facilities available, but there is not likely to be a great deal of difference among them.

Then there is a group of examinations which might be termed precautionary. The surgeon, for instance, finds it necessary to operate upon an elderly patient and is doubtful whether there is real danger of the development of uremia after the operation. One of the renal function tests or perhaps merely an estimation of the blood urea will serve to

give him some definite information upon that point. Some of these precautionary examinations may also be regarded as public health measures, such as the throat cultures made upon admission of children to a hospital or the "routine Wassermann" that is so generally asked for in many hospitals and institutions.

The above reasons will, I believe, account satisfactorily for all of the laboratory examinations that may be considered to be justifiable. Of course, in hospitals that are used for the training of students and internes, one finds a certain number of laboratory tests that are called for as a part of the educational activities of the institution. Laboratory examinations may also form an important part of a research problem but these hardly deserve consideration at this time. Other excuses for calling upon the laboratory are less justifiable. It sometimes happens that when a formal report of a case is to be published or presented at a meeting the author is found to be asking for every conceivable type of laboratory examination so as to convey the impression that the case has been fully worked up. I mention this practice only to condemn it. Our journals and the programs of our meetings are already too crowded and our effort should be to exclude such superfluous material rather than to encourage its use. This procedure is analogous to that of the House Surgeon who boils up every instrument in the cabinet for every operation for fear that on some occasion the operating surgeon may call for some instrument that has not been sterilized.

It is in the hospital, rather than in private practice, that there has arisen the greatest abuse of the laboratory in what is called the "routine examination." There is a feeling on some medical services that for every patient admitted there should be required urinalysis, complete blood count, Wassermann reaction, blood urea and blood sugar estimations and even an x-ray film of the chest. Some institutions even boast about the extensiveness of the routine they enforce and are dismayed when they hear that another organization of good repute performs no routine examinations. It is true that for economic reasons, these are now likely to suffer some restriction but that is an

involuntary concession. It is argued that it is desirable to have on record the results of the greatest possible number of tests, regardless of their bearing upon the condition for which the patient has come to the hospital, so that if he should again come under observation at some future time it would be possible to detect changes in his condition. It is also pleaded that if these examinations are performed routinely, it is possible that some conditions not easily recognizable might be detected. This practice appears to be part of the tendency which one sees in some of the modern ultra-scientific institutions toward an ideal completeness in their dealings with the patient.

Such arguments carry a certain amount of weight and might be regarded as valid provided the diagnosis, as sometimes happens, is not obscured by the mass of material which is accumulated in carrying out this practice, were it not for the fact that this habit of routine examinations exercises a subtly deteriorating influence upon the physicians who use it. Man is essentially lazy and must be driven to thinking, so that the institution of any routine which relieves him of the need for thought is likely to induce him in time to cease that exercise altogether. Thus the tendency is almost inevitable for the clinician to cease to look for evidences of diabetes, for example, if he knows that the next day he will find the results of the blood sugar estimation on the chart. But if the influence of this practice is bad for the clinician, it is much worse upon the interne who is learning his profession and can so readily be enticed into casual and undesirable practices. The proper method to follow is to insist that a satisfactory reason be given for each and every laboratory examination that is requested. The clinician may well ask himself two questions before requiring tests. Why do I want it? Would I have it done if I were the patient? This is an ideal that is probably not attained in any institution but is one that we should constantly bear in mind as the desideratum. The interne should be trained to make diagnoses, as far as possible, wholly without the help of the laboratory and to commit himself definitely to the diagnosis so made. In some hospitals they call these impressions. He should then select

which of the laboratory tests he wishes to have done and so check the accuracy of his reasoning against the results. This matching of his wits against the apparently more exact procedures of the laboratory is not only fascinating, but furnishes excellent training of his powers of observation and prepares him for the time when, because of expense or of lack of facilities he will be compelled to make his diagnoses with a minimum of laboratory assistance. The laboratory is not opposed to a large number of examinations per se, but when they are unnecessary they are wasteful, not only in terms of money but even more so in terms of human energy. There are some house officers who spend a large share of their time merely collecting specimens, time that might better be directed to the observation of disease and the study of patients.

However, when we have carefully considered what we are going to ask of the laboratory and when the work has been done and the reports are at hand, how are we going to interpret the results? I am sure that it is neither expected nor desired that the author discuss in encyclopedic fashion the individual significance of each and every laboratory test and method. If he were to do so, this article would prove to be exceedingly tiresome and, moreover, few readers would long remember its contents. Rather, it may prove more profitable if we attempt to discover some of the principles governing the interpretation of the results of laboratory examinations generally, resorting to illustrations whenever they appear to be helpful.

Experience and Ability as Factors in Laboratory Tests

In the first place, I think we may say that *the value of a laboratory test depends upon the experience and ability of the person who interprets it*. You are undoubtedly well aware that the field of the laboratory, like all other branches of medicine, is growing with extraordinary rapidity. New tests are being introduced almost as frequently as new drugs and they must be evaluated not only upon the rationality, sensitiveness, and reliability of the test itself, but also upon the

results of the test obtained in the normal, in the clinical condition in which the test is expected to be useful and in other conditions. Furthermore, there is no necessary relation between the rationality of the test and its clinical value. For instance, the agglutination of the X-19 strain of the *Bacillus proteus* by the serum of a patient, may point definitely toward a diagnosis of typhus fever, in spite of the fact that we as yet know of no rational basis for such an occurrence.

Since the interpretation of a test must be made in the light of two entirely separate series of observations, one in the laboratory and the other in the clinic, the most satisfactory results can be attained only when the interpreter has had experience in both of these fields. It is for this reason that the clinician without laboratory training is so frequently at a loss in evaluating the significance of laboratory examinations. Similarly, the director of a laboratory, who is trained solely in the laboratory branches of medicine, who is not a clinician and who may not even hold an M.D. degree, can supply you merely with the result of his technical procedure expressed in plus or minus signs or in figures or in word descriptions of pictures he has seen. He may be able to guarantee to you the accuracy of his technic, but he lacks the background which is frequently necessary for the intelligent translation of his results into helpful clinical data.

Therefore, the director of a clinical laboratory should not only be a physician but he should also have had a reasonable amount of clinical experience and should take care to maintain his contact with the clinical side of medicine. Furthermore, the existence of his clinical experience should be appreciated and he should be regarded as a consultant in the field of laboratory medicine. Like any other consultant, he should be presented with the complete clinical history of the case and should have an opportunity to examine the patient if he so desires. Without this information he is merely a technician acting at the command of the clinician. He should be expected to advise what tests should be carried out in the investigation of the case and later to aid in the interpretation of the results of those tests. In some instances he may also be

asked to advise concerning treatment. For example, the pathologist who is familiar with the history of the patient and who has studied the sections, is the one who is most likely to be able to give information concerning the radio-sensitivity of a tumor and he is frequently the one who decides what course will be followed by the surgeon in his operation.

Naturally, I do not mean to intimate that in the majority of instances the practitioner is necessarily unable, himself, to decide which tests he will have done and what the reports signify. There are many instances in which there need be no intermediary between the practitioner and the technician as is the case with the usual blood counts, urinalyses, and chemical examinations of the blood. But I repeat that only too frequently the clinician has an exaggerated idea of the importance of laboratory work and his constant tendency is to ask for unnecessary examinations. For example, the so-called "complete blood count" is not needed in a large percentage of the instances in which it is requested and during the past few years one finds a "routine blood chemistry" asked for with increasing frequency, not rarely without any idea of what it should include. It is often a mere "shot in the dark" in the hope that some game may be brought down.

However, a request for unnecessary work merely adds to the labor of the laboratory and the burden on the pocket-book of the patient. The failure to ask for desirable examinations often has much more serious consequences. One would be appalled were one to realize how often transfusions are performed when no test for syphilis has been made upon the donor. Yet the literature is full of instances of the transmission of this disease by transfusion. At the New York Hospital we looked up the records of these tests carried out on non-professional donors, that is friends or relatives of the patient and found that out of 250 donors the flocculation or complement fixation tests were sufficiently positive to exclude their use in 5.2 per cent. It is a well-recognized rule that most tissue removed from the body should be examined by the pathologist. This does not necessarily apply to tissue removed because of

traumatic injury or perhaps such specimens as tonsils, although the findings in the latter may be of interest. It is particularly applicable to masses or anything that might be ranked among the so-called tumor processes. Even the most benign-looking wart may yield upon examination, information that would influence treatment and prognosis, as it would were it to reveal the presence of melanosarcoma. Apart from the scientific value of such studies, the examination is a source of considerable relief to the patient if he can be assured that there is no question of malignancy. And yet, especially outside of the larger cities, such examinations are probably omitted in an appreciable percentage of the cases.

The field of laboratory medicine has become not only larger but more complicated, so it will often be found that the director of a large laboratory is not familiar with the details of all of the work carried on under his direction and he may find it necessary to delegate some of the supervision to an assistant. But the well-rounded and capable director will have chosen capable assistants and with his background of clinical medicine will be one of the most valuable of your consultants. The frequent use of the clinical pathologist in this capacity will often save both time and money in establishing a diagnosis and instituting treatment.

Second, the result of the laboratory test constitutes an objective symptom that is no more frequently pathognomonic than is any other objective symptom. Every laboratory report, therefore, must be interpreted in the light of all of the available clinical and historical data and one must not expect a reliable opinion from the pathologist if he is deprived of this data. It cannot be too frequently or too strongly emphasized that the laboratory cannot and should not be relied upon to make diagnoses by itself. It should be expected merely to supply the means by which one is enabled to detect certain symptoms not otherwise available and which may or may not be helpful in arriving at a diagnosis or in controlling treatment. The laboratory is not a slot machine into which is to be dropped a tube of blood, a drop of pus or a piece of tissue and from which in return there is obtained a slip of paper upon which is typed a diagnosis.

It is possible to mention numerous instances which illustrate this principle. An agglutination of the typhoid bacillus by the serum of a patient is frequently an indication of typhoid fever, but it is also found in typhoid carriers, in those who have recently been inoculated with typhoid vaccine and sometimes in trichiniasis. In this connection it should be noted that the laboratory is seeking constantly to perfect its methods and one notable recent instance is the work of Gilbert of the New York State Department of Health in the introduction of new antigens for the Widal reaction. These consist of bacteria that have been killed by formalin or other treatment and by their use she is apparently able to detect a difference in the reaction shown by a patient suffering with typhoid fever from that in a patient who has been vaccinated against the disease. A high blood sugar is associated with diabetes mellitus but can be found upon occasion in a number of other conditions. The detection of an albuminuria arouses in all of us a suspicion of the presence of nephritis and yet, as is well known, such a finding is not diagnostic and the positive demonstration of a nephritis may involve long and difficult procedures. In the case of the newer laboratory methods even greater caution must be exercised in interpretation because our experience with them is limited. Among these one may mention the demonstration of agglutinins for sheep's red cells (heterophilic antibody test, Paul-Bunnell test) in the serum of patients suffering with infectious mononucleosis. Today this is regarded as a more or less helpful procedure. Five years from now it may be considered indispensable, or it may be entirely forgotten.

Nor should the practitioner insist that the laboratory suggest the diagnosis to him. The charge is frequently made that, among the younger practitioners especially, there are those to be found who are unwilling to make a diagnosis until support is at hand from the laboratory. These men expose themselves to the criticism of lacking in confidence in their ability to elicit physical signs, or lacking in knowledge of the symptoms of disease or being too indolent to study their patient and so fail to consider typhoid

fever unless the Widal or the blood culture suggest it, or do not diagnose pulmonary tuberculosis unless the sputum examination is positive. The fallacy of the latter practice becomes obvious when one visualizes the process by which the tubercle bacillus gains admission to the sputum. The tubercle must be so placed and have grown to such a size that it has broken down and formed an open ulceration involving a bronchus and this in turn must be in more or less free communication with a larger bronchus, so that the lesion must be well advanced before it can contribute its bacterial content to the sputum. Suspicion should be aroused long before this has happened, because, as is well known, treatment is most effective in the early stages of the disease. Adherence to such a practice will naturally result in time in the atrophy of the clinical faculties and deterioration of ability.

Third, a diagnosis should only very rarely be made SOLELY upon the basis of a SINGLE laboratory examination. It is fortunate that, in general, the practitioner is sufficiently stubborn and sufficiently confident in his own clinical ability, to refuse to accept the dictum of a laboratory report when it conflicts with his own clinical findings. However, certain laboratory procedures have attained such prestige that the tendency among physicians is, consciously or unconsciously, to regard them as truly pathognomic. This is perhaps most likely to be the case in the diagnosis of syphilis. The clinician recognizes that this disease is protean in its manifestations, frequently difficult of recognition and that the history is notoriously unreliable, patients tending to deceive both their physician and themselves. He has seen numerous instances in which a positive serologic reaction has aroused the first suspicion of the presence of this infection and in consequence a curious situation has arisen. It will be quite readily admitted that the Wassermann reaction while almost specific in the clinical sense, is nonspecific when regarded as an immunological reaction and that while it is of great practical help it is far from perfect and yields a certain number of false reactions. Yet there are many physicians who, perhaps only unconsciously, are likely to feel that a 4-plus

result means syphilis and a negative result means no syphilis. The situation has been more or less aggravated by the introduction of the flocculation tests (Kahn, Kline, Hinton, Meinecke, Vernes, etc.) which are more sensitive than the complement-fixation (Wassermann) test and are said to be more specific.

The principle remains that the diagnosis of syphilis should not be made upon a *single* positive serologic test unsupported by other evidence. However, one will ask what is to be said when one obtains repeatedly strongly positive Wassermann or flocculation tests, or both, and no history of syphilitic infection can be obtained and the condition of the patient is such that syphilis may possibly, though not necessarily, have played a part in its causation? In such a situation two courses are open. The first is to watch the patient, seeing him at intervals, repeating the blood examinations and searching carefully at each visit for evidence of activity of syphilitic infection, or, second, to institute antisiphilitic treatment. If the condition of the patient improves under this treatment and the positiveness of the serologic reaction diminishes, then the likelihood of the diagnosis of syphilis is increased.

If one adopts the second of these alternatives, it must be borne in mind that the treatment instituted may be far from innocuous, not only in the toxic effect of the drug administered, but in addition the patient may acquire a syphilophobia which may have a most depressing influence upon him for the remainder of his life. On the other hand, if the treatment is adequate, the possibility will be prevented of any return of activity of the syphilitic infection and thus probably the life of the patient will be prolonged. In each instance one's decision must be made upon the merits of the case according to one's own information and experience.

Another reason for refusing to make a diagnosis solely upon a single laboratory examination, is that even in the best of laboratories, an individual result may be wholly erroneous. It may astonish the reader that as a laboratory man I emphasize this possibility, but it must be remembered that these tests are carried out usually by technicians and frequently in

large numbers. These technicians are often well-trained in procedure but generally lack adequate background. Their work is susceptible to numerous accidental occurrences which may act to falsify their results. Specimens may be exchanged in transfer from tube to tube, labels may become loosened or lost, name and specimen may become confused, standard solutions may go wrong, reagents may deteriorate suddenly and unexpectedly, any one of a number of things may happen to nullify the greatest possible care in the execution of methods. We have attempted to control this possibility to some extent by encouraging the clinicians to report at once any inconsistency of laboratory result and clinical finding and this has been helpful in many instances. A slip, moreover, may have far-reaching consequences. I have seen acute syphilophobia develop because a technician failed to evaluate properly the degree of anticomplementary activity present in a Wassermann reaction. Therefore, in the absence of a change in the condition of a patient, it should be possible to obtain consistently reports that are in agreement if they are to be considered significant.

Fourth, the form in which the report is rendered should not mislead the physician into overrating the sensitiveness and accuracy of the methods used. It is quite true that laboratory methods are likely to be much more sensitive than the unaided senses. By determination of the icteric index, for example, we are enabled to detect degrees of or changes in the intensity of jaundice that are not recognizable by the naked eye. Hemoglobin estimations are more reliable in the detection and estimation of the degree of anemia than is visual inspection of the conjunctivae. But when laboratory reports are presented in figures, there is frequently seen a tendency to exaggerate the accuracy of the method. Red cell counts for example, should always be reported in even hundreds of thousands or one may be misled into thinking there is a real difference between a count of say 3,220,000 and one of 3,280,000. Similarly hemoglobin should be reported to the nearest 5 per cent or what is better to the nearest 0.5 gram per 100 c.c. of blood. Blood sugar quantities should be

expressed to the nearest ten milligrams per 100 c.c. of blood.

There are two reasons why it is desirable to express the result only approximately and thus to avoid an appearance of mathematical accuracy, which is unattainable. The error inherent in most of the quantitative methods at our disposal must be taken into consideration. This error is frequently from 2 to 5 per cent even with the greatest possible technical excellence. In addition to this there is the important fact that many of the substances for which we examine the material submitted to us, exhibit natural variations in quantity which may far exceed the limits of error of our methods. Thus the blood sugar may vary between 70 and 90 milligrams per 100 c.c., a spread of about 25 per cent, and still be regarded as within normal limits. A similar variation in the figures met with in disease must be allowed before we can regard any observed changes as significant unless possibly specimens are taken under similar conditions. So a fall of the blood sugar from 250 mg to 220 mg may not necessarily be regarded as evidence of improvement.

This situation has been the basis for much of the criticism that has been directed against the clinical pathologist as an accurate worker and a clear thinker. When he is using a method which is accurate to 3 per cent in the estimation of a substance which may show a spontaneous variation of 20 per cent he is accused of being only too likely to feel that great care in carrying out the method is unnecessary, for even with a 10 per cent error the results should still discover significant variations. Such a mental attitude is, of course, incompatible with consistently good work and in most instances will eventually lead to the issuance of reports that are wholly unreliable. The truth of the matter is, that we are still so ignorant of many of the factors which may influence the changes which we study, it is only by the closest possible adherence to careful technique we can expect to furnish information upon the basis of which more complete explanation of body activities may be formulated in the future. As an example of some possible factor which is not understood there is the observation made some

years ago by Madsen of Copenhagen that the percentage of positive Wassermann reactions varied from year to year and that these percentages appeared to form a more or less regular curve. When we came to examine our tabulations at the New York Hospital, we found a similar phenomenon apparent. The figures are as follows:

	Per cent (positive results)		Per cent (positive results)
1922	7.0	1927	7.6
1923	7.9	1928	6.6
1924	7.9	1929	5.0
1925	8.9	1930	5.8
1926	8.5	1931	4.2

These figures are based on an average of about 5,000 examinations per year. One may speculate as to the significance of these variations but no adequate explanation has as yet been advanced.

Fifth, the proper precautions must be exercised in the selection and collection of specimens for examination. Some of the factors which influence laboratory results have been recognized and must be taken into account in the collection of specimens. Food, bodily activity, fever, the time of day, the presence of infection, are some of these factors but the principal one seems to be food. The precautions are obvious that must be taken in order that a basal metabolism estimation may be reliable. The patient must be fasting, must have a normal temperature and must be wholly at rest, both mentally and physically. But what may not be quite so obvious is the influence that food has upon the result of other procedures. The icteric index, for instance, is likely to be wholly unreliable if there is used for its determination blood taken after a meal. The Wassermann reaction may also be influenced by meals. We have in a number of instances obtained more or less positive tests in blood taken after dinner in the evening, while specimens taken from the same individuals in the morning before breakfast have yielded entirely negative results. We have also seen one notable case, a patient with syphilis and pernicious anemia, in which the blood gave a positive Wassermann reaction when she was fasting and a negative one after meals. As her disease progressed (this was before the days of the liver treatment) she ate less and her Wasser-

mann became permanently positive. Apparently in this instance some substance was absorbed from the food through the abnormal intestinal mucosa which neutralized the so-called Wassermann substance usually present in her blood. Many of the chemical examinations of the blood are also definitely affected by the ingestion and absorption of food and the same may be said to a lesser degree of the white cell count. Under the circumstances the safest rule, if one desires to obtain reliable and comparable results, is to draw all specimens of blood for chemical and serological examination from patients while they are in the fasting state.

In cases in which a tentative diagnosis of subacute bacterial endocarditis has been made and the patient is running a fever only irregularly, blood for cultural examination should be drawn when the temperature is highest, for it is at these times that bacteria are most likely to be present in the bloodstream in detectable numbers. The same precaution may be followed profitably in other cases in which a bacteriemia is suspected and the temperature curve is irregular. In cases of suspected pulmonary tuberculosis, the proper care used in the collection of a specimen of sputum will greatly enhance the possibility of success of an attempt to find tubercle bacilli in it. An astonishing amount of time is wasted in the examination of slides made from specimens that consist entirely of saliva, with little or no material from the bronchi. The same may be said of specimens collected by cystoscopy for animal inoculation for the diagnosis of tuberculosis. The operator, in the attempt to insure a specimen of sufficient volume, frequently directs the patient to drink a large amount of water which results in the collection of very dilute specimens of urine from the ureters. This renders the detection of tubercle bacilli more difficult no matter what method is used.

The care with which tissue is selected for microscopic examination frequently determines the success with which the pathologist can render an accurate opinion. It must be remembered that he is able to report only upon the tissue that is submitted to him and there is no way by which he can guarantee that the same picture will be found throughout the

entire lesion. Whenever it is possible, all of the tissue removed should be sent to him for examination, or better still he should be present at the operation. In the case of a biopsy he should direct what tissue should be removed for sectioning.

There will no doubt occur to all many other illustrations of this principle that the specimen must be collected properly if the examination is to be successfully carried out. On the whole, these factors tend to affect principally the significance of a negative result, but they always require consideration.

Sixth, in general a positive report has more significance than a negative result. This is particularly true of those examinations which can be reported as negative or positive rather than those which are reported in figures or as descriptions. In the examination of the sputum, for example, a report of the finding of acid-fast bacilli has greater significance than a report of a failure to find them. A negative result of an examination may not present a true picture for a number of reasons. The specimen may not have been properly selected, the examination may not have been carried out with proper diligence, the method used may not have been sufficiently sensitive or the manifestation sought for may be present only intermittently. For these and other reasons we are accustomed to attribute much less importance to a negative result.

Seventh, the report of a laboratory examination must be interpreted also in the light of the method used. In respect to a fairly large number of the examinations we are accustomed to use, the several methods which may be employed may yield distinctly differing results and it is possible to interpret them only when we know what method has been followed. This is perhaps best seen in the estimation of the amount of sugar in the blood. The older Benedict picric-picrate method yielded figures of between 100 and 125 mg. per 100 c.c. of blood in the normal. The later Folin method was rather more specific and gave us figures of from 90 to 110 mg. In spite of this fact, the older method was adhered to by many laboratories because the very fact that the figures were higher, tended to make the clinician more cautious in relaxing his treatment. The most recent Benedict

method has established from 70 to 90 mg. as the limits of the normal and since it is believed that these figures represent very nearly the true glucose content of the blood, there has been a rather general tendency toward the adoption of this method. However, to a man who is accustomed to this recent Benedict method, the figures furnished by the older technic would, if unexplained, suggest that nearly everyone is diabetic.

The same situation obtained formerly in respect to hemoglobin estimations. Each method in use included its own standard for the normal and the term "100 per cent hemoglobin" got to mean almost nothing beyond the fact that the patient was probably not anemic. Fortunately, we are in recent years gradually making uniform the practice of reporting hemoglobin in terms of grams of hemoglobin per 100 c.c. of blood. All hemoglobinometers can easily be standardized on this basis and there remains only the task of educating the profession up to recognizing the meaning of reports framed in these terms. This admittedly is a difficult task but one that is being gradually accomplished as the young graduates go out and mix with their elders in the profession. One great difficulty is, as you know, that the amount of hemoglobin in the blood of normal individuals varies widely depending upon age, sex, and residence (climate, altitude, and so on). If we are to think at all in terms of percentage we must first agree upon some figure that is to be accepted as normal. The desirable method would be to adhere strictly to terms of grams per 100 c.c. of blood, but while many are learning the new terminology it will be helpful to select arbitrarily a figure that may be considered the average normal amount of hemoglobin per 5,000,000 red cells per 100 c.c. of blood. At the New York Hospital we have followed Wintrobe and Osgood and Haskins and have adopted 14.5 grams as our arbitrary standard. At the present time it is our practice to render our reports in terms of both standards so that they read, for example, 7.2 gm. per 100 c.c. (50 per cent of 14.5 gm.). This report is intelligible to all and is useful during the transition period.

The diversity of methods is such that

recently there has been published a book by Kolmer and Boerner called *Approved Methods*, written in collaboration with a committee of the American Society of Clinical Pathologists, in which the attempt has been made to select methods that are reliable for each of the more commonly requested examinations. It is hoped that clinical pathologists generally throughout the country will adopt these methods so that results of examinations made in different laboratories will become comparable. Even if that end is attained, however, it would be safer to designate in each report the method used.

I would not give the impression that the laboratory man feels the clinician is responsible for all of the errors in judgment that occur. The director of a clinical laboratory has also a large responsibility in the correction of difficulties. He must seek to devise rational controls designed to exclude unnecessary work as far as is possible and I have already mentioned one method whereby this problem can be attacked. His interest should go far beyond the limits of the institution he serves, as for example, in accumulating public health data and in testing the value of methods. Within the institution, a properly conducted laboratory should make its influence felt in almost every department. In the New York Hospital, for example, it is the practice to report to the laboratory every reaction that occurs after either a transfusion or the intravenous administration of a solution. This is in part, of course, a selfish interest, since the laboratory carries out most of the tests needed before a transfusion and it also manufactures the glucose solution used in infusions, but it also regards itself as an important and integral part of the insti-

tution and bound to suggest improvements wherever they appear to be possible. The careful account which is maintained of its expenses and the attention which is used in purchasing has impressed favorably both the Accounting Department and the Purchasing Agent. There are thus many ways in which the laboratory under an alert director may make itself felt, always, however, keeping in mind the obligation to maintain an active interest in developments in the clinical field as well as in the sphere usually regarded as pertaining more strictly to the laboratory.

In the course of this article there have been established certain principles which should be applied in the interpretation of the results of laboratory examinations and their faithful application will serve to reduce to a marked extent any existing difficulty in correlating laboratory and clinical findings. These principles are:

1. The value of a laboratory test depends upon the experience and ability of the person who interprets it.
2. The result of a laboratory test constitutes an objective symptom.
3. A diagnosis should only very rarely be made solely upon the basis of a single laboratory examination.
4. The form in which the report is rendered should not mislead the physician into overrating the sensitiveness and accuracy of the methods used.
5. The proper precautions must be exercised in the selection and collection of specimens for examination.
6. In general a positive report has more significance than a negative result.
7. The report of a laboratory examination must be interpreted in the light of the method used.

525 EAST 68TH STREET

THE DOCTOR REVOLUTIONIZING CIVILIZATION

Some good reasons why the medical profession should decide its own future, instead of surrendering to the politicians, were given by Dr. C. T. Ryland, of Lexington, Mo., in his presidential address to his State Medical Association. In a little more than a century, he remarked, the medical profession has done more for the race than has ever before been accomplished by any other body of men. These gifts to the people in the forms of vaccination, sanitation, anes-

thesia, antiseptic surgery, the science of bacteriology and the new art in therapeutics, have effected a revolution in civilization.

The medical profession today is one of the few remaining groups that cling to the traditions for which blood has been shed from Lexington to the Argonne. It begs to be let alone, to carry on according to its honorable principles without interference from bureaucratic and governmental infringements.

SEPTICEMIA FOLLOWING TONSILLITIS

CAESAR HIRSCH, M D, *New York City*

The severe complications, which sometimes follow inflammations of the throat and frequently even cause death after a short illness, were already known to physicians of past generations. The present article takes up the class of septicemia which follows tonsillitis, which in almost all cases may lead to death unless an operation is performed. This kind of disease was only recently set forth in a minute description by Eugen Fraenkel. Particularly referred are bedside cases, which usually do not appear immediately after an ordinary acute suppurative inflammation of the tonsils, but only after the decline of a tonsillitis, especially in succession to a peritonsillar phlegmon or abscess.

Several cases in the United States were published prior to Fraenkel's contribution. One of these, by C W Long,¹ in the year 1912, reported a patient who died of cavernous thrombosis. A second case, written up in 1917 by Charles Goodman,² reported finding the internal jugular vein thrombosed at the anastomosis of the common facial vein. A third case, published in 1920 by H P Mosher,³ called particular attention to the abscesses in the pharyngomaxillary fossa, which in his opinion cause the thrombosis of the jugular vein.

In a sense these publications anticipated Fraenkel, and it was chiefly through his publications in 1925 and 1926⁴ that the general attention of the profession was drawn to this disease. Fraenkel reported 15 cases of thrombosis of the internal jugular vein, which he thought originated in conjunction with a primary thrombophlebitis of the tonsillar veins.

Fraenkel believed he had demonstrated primary thrombophlebitis of the tonsillar veins in his 15 cases. The infectious substances, he believed, are dispersed into the body either directly from the diseased veins or by simultaneous spreading of the retrotonsillar thrombophlebitis into the internal jugular vein. Infected particles of the thrombus are thrust into the systemic circulation, frequently accompanied by chills and spike like hectic fever, some-

times also by a high continuous fever curve. They settle either in the lung or, less often, in the depth of the pulmonary tissue, and here frequently produce subpleural, embolic, wedge-shaped infarcts. These soon show purulent softening and lead to pleurisy, which develops into an empyema, caused by the suppurative infection. Whether they are thrombotic lumps or only piles of bacteria, they enter the systemic circulation through the pulmonary circulation and cause metastatic abscesses in other parts of the body, such as joints, muscles, kidneys, spleen, liver, and so on.

Another very severe complication which usually becomes fatal is the expansion of the thrombophlebitis toward the periphery, that is toward the skull, proceeding from the retrotonsillar veins through the numerous anastomoses, especially via the pterygoid plexus to the cavernous sinus or via internal jugular vein to the sigmoid or transverse sinuses. In both cases suppurative meningitis will be the tragic conclusion. This intracranial complication was observed in almost 10 per cent of the fatal cases.

Contrary to Fraenkel, who only saw his cases on the dissecting table, Uffenorde⁵ pointed out in his numerous publications that it is not the primary thrombophlebitis of the tonsillar veins, which causes the disease, but that it is a primary lymphangitis or lymphadenitis, respectively, and that the suppurative process then secondarily expands from the outside to the outer wall of the veins, thus producing a peri- and then endophlebitis and only later causing a thrombosis.

Uffenorde, who viewed most cases as not a question of primary thrombophlebitis of the tonsillar veins, soon received additional support by the publications of Waldapfel,⁶ Joel,⁷ Anders,⁸ and Greifenstein,⁹ as well as by the investigations which the present author¹⁰ undertook with his assistant, the Hungarian Dr. Pajor, in the Pathological Institute of Stuttgart.

Our procedure consisted in severing the angle of the lower jaw, which made

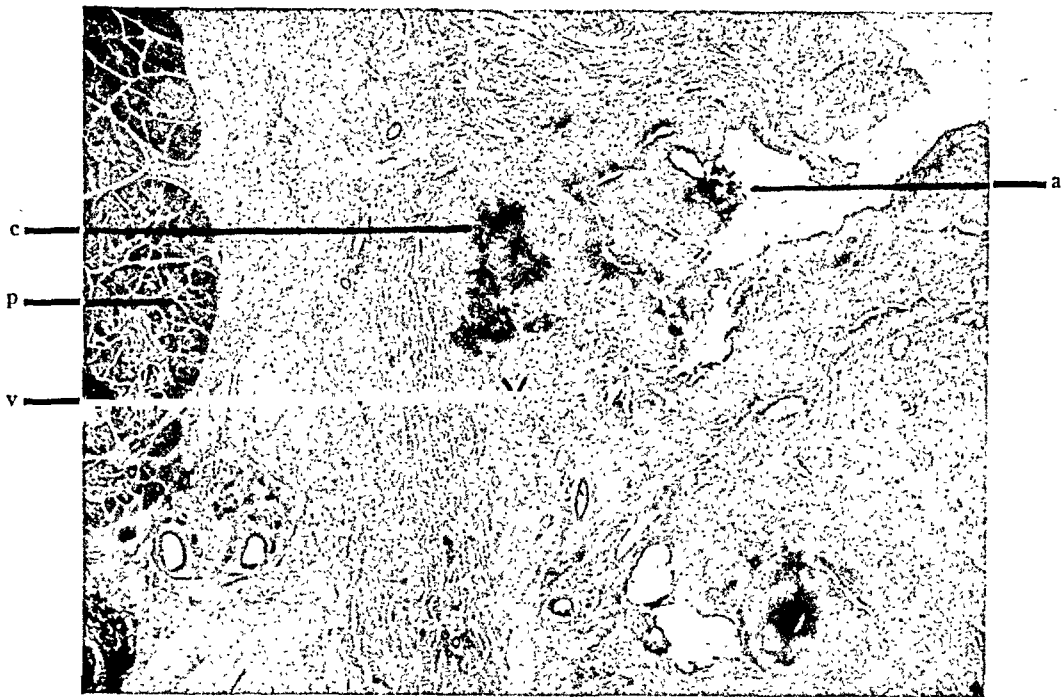


Fig. 1. Abscess (*a*) opened through operation. Behind the abscess cellulitis (*c*) with thrombosed veins (*v*). Parotid gland (*p*).



Fig. 2. Deeper section. Abscess (*a*) with periphlebitis (*p*) and thrombophlebitis (*th*).

possible the removal of the entire diseased region, and an examination of it in large microtome sections without disconnecting its topographical relationships. In our examinations we always found phlegmonous suppurative processes, especially in the parapharyngeal space.

The parapharyngeal space is the space of loose connective tissue, which is bordered medialward by the pharyngeal constrictor muscle and the pharyngeal fascia. The lateral boundary of this space is formed by the ascending branch of the lower jaw and the capsule of the parotid gland, the rear by the prevertebral fascia. In front of the vertebral column the parapharyngeal space or, as called by Mosher, the pharyngomaxillary fossa, becomes the retropharyngeal space. The parapharyngeal space extends up to the base of the skull and alongside the esophagus and trachea down to the mediastinum. The stylopharyngeal muscle divides the parapharyngeal space into an anterior and posterior chamber. The anterior chamber consists of loose connective and fat tissue and contains a rich net of veins and numerous lymphatic glands.

The large vessels of the throat, as well as the cranial nerves, which come down from the base of the skull (accessory pneumogastric, glossopharyngeal, hypoglossal, and sympathetic) run along the posterior part of the parapharyngeal space. A lymphatic gland, which is easily involved by infections of the nose, epipharynx, and tonsils, is also situated in the posterior chamber of the pharyngomaxillary fossa.

The tiny veins, situated immediately behind the tonsils, proved to be more or less thrombosed in all four cases examined by us, each one in about 400 sections. We would like to minimize the importance of this fact, however, as our histological examinations of more than 100 chronically inflamed tonsils removed by tonsillectomy, almost always showed this type of small and smallest thrombosed veins. We would like to consider these findings, which were confirmed by Riecke's investigations¹¹ as remnants of expired local thrombophlebitis following angina or peritonsillar abscess. But we must not, to be sure, forget that in an acute stage such thrombophlebitic veins

may spread pus into larger veins and into the systemic circulation in the sense of Fraenkel's statement.

We found in the parapharyngeal space phlegmons or abscesses, spreading downward (paravascularly) and involving vessels either in continuity or segmentally. We found numerous veins secondarily thrombosed, which explains how the septic thrombophlebitis originates secondarily in the large veins. The segmental thrombophlebitis can be explained by the extension of the abscesses to the wall of the vein at different parts of the vessel, thus causing several independent thromboses, not connected with each other within the lumen of the vessel. Like Uffenorde, Greifenstein, Fraenkel, August L. Beck,¹² and others, we could demonstrate suppuratively inflamed lymphatic glands, touching the vein and infecting it secondarily.

The causes of progression of thrombophlebitis toward the skull have been the subject of a lively controversy due to their ontogenetic and therapeutic importance. Wessel¹³ in particular has devoted himself to the study of this question. The reversal of the bloodstream through obstruction of outflow on stasis, caused by a highly inflamed edema or enlarged lymphatic glands leaning against the veins, are considered to be favorable conditions. Therefore, ligation of the jugular vein, still carrying blood, is considered dangerous by many surgeons. This group believes that ligation of the jugular vein causes reversed thrombogenesis in the anastomosing and branching veins, possibly even as far as into the tonsillar veins.

We can, however, not agree with these men. We otologists have had plenty of opportunity to experiment with ligation of the jugular vein in connection with otogenous sinus thrombosis. Never did we experience such extended reversed thrombosis. The flowing of blood is usually made possible to a greater or lesser degree via parallel venous anastomoses, as for example via external jugular vein or the vertebral veins. Therefore, we do not consider a correctly performed unilateral ligation of the internal jugular vein in any way dangerous. Claus¹⁴ has even reported several cases in which he has made a bilateral ligation of the internal jugular vein at the same time.

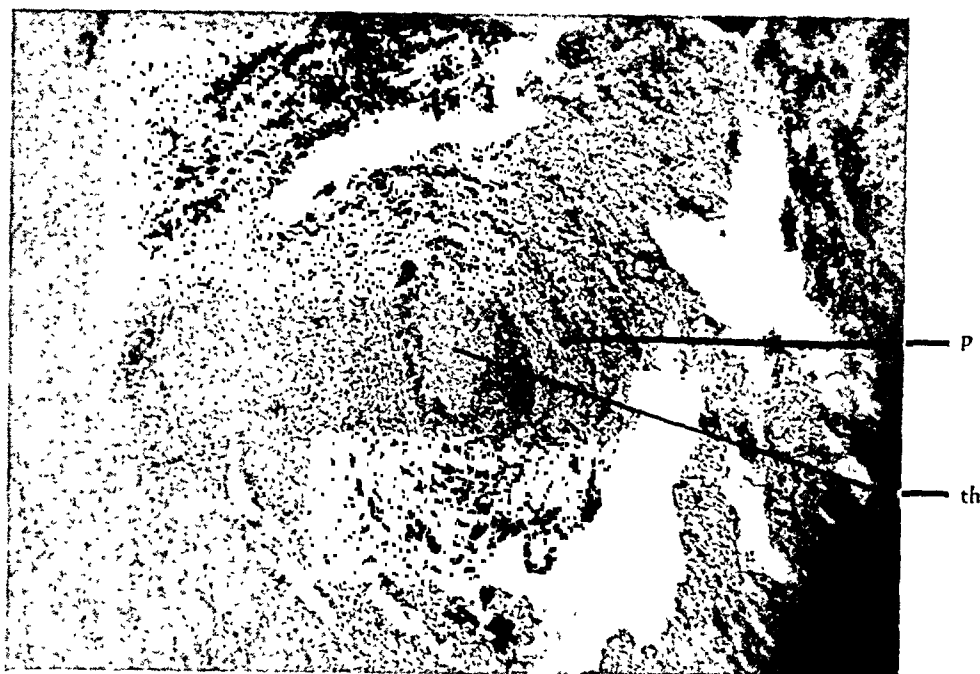


Fig. 3. High power shows the periphlebitis (*p*) and the thrombosis (*th*) partly organized.

It is probably correct to assume that the closer to the skull a mechanical obstruction of the blood stream occurs, the easier a reversed endophlebitic transition into the sinuses can take place due to the missing anastomoses. The endophlebitis progresses more rapidly, given a suppurative process of the pterygoid plexus, than a possible simultaneous primary phlegmon of the parapharyngeal space. If such phlegmon penetrates as far as the plexus, an infection of the plexus may easily lead to an endophlebitic spread into the cavernous sinus. The existence of a purely phlegmonous extension into the interior of the skull is quite possible.

Before we discuss the clinical aspect of post-anginous septicemia more thoroughly it might be appropriate to define briefly the meaning of septicemia, all the more so, since quite recently controversies, concerning this question, have arisen. The clearest definition, I believe, would be the following:

We are dealing with septicemia when a centre has formed inside the body, from which pathogenic septic bacteria constantly or periodically disperse into the bloodstream to such a degree that by this invasion subjective and objective symptoms of disease occur.

According to our explanations of the pathogenesis of septicemia following tonsillitis, we regard the tonsil as the infectious focus for development of the disease. However, the source of septicemia which is really responsible for occurrence of sepsis is the retrotonsillar cellulitis or abscess.

In cases in which (according to Fraenkel) the process develops endophlebitically with formation of a thrombus, and which usually become fatal in a very short time, the suppuratively softening thrombus would have to be considered the source of septicemia. We know that septic organisms do not increase in the circulating blood in any bacterial infectious disease of man, not even in cases of severe septicemia. If a large number of virulent bacteria have entered the vessel system, rise of temperature and chills appear. The chills, however, usually do not begin until one or two hours after the invasion of the bacteria into the bloodstream, i.e., when the majority of the bacilli have been absorbed in the organs and their endotoxins or allergens are released.

This accounts for the fact that bacteriologic examination of the blood during

chills usually do not yield results. Chills always stand for bacterial or protein invasion into the circulating blood and prove that the source of septicemia communicates with the bloodstream. Frequently we are unable to find bacteria in the blood. Friedemann,¹⁵ therefore, proposed to search for them at the place where they enter the bloodstream. He takes the blood, to be examined bacteriologically, out of the venous trunk, in which the source of septicemia and the systemic circulation are supposed to communicate. He calls this method "topodagnosis of septicemia."

TABULATION OF BACTERIA

Approximate Percentage and Kind of Septic Organisms Present

	<i>per cent</i>
<i>Streptococcus hemolyticus</i>	55
<i>Streptococcus putridus</i>	20
<i>Streptococcus viridans</i>	5
<i>Pneumococci</i>	5
<i>Staphylococcus aureus</i> and <i>albus</i>	7
<i>Streptococci</i> and <i>Staphylococci</i>	6
<i>Anaerobics</i>	2

Kissling¹⁶ reports that in 32 cases blood culture was 22 times positive, and of these only 8 cases recovered, while out of the 10 cases with negative blood culture 5 were cured.

The clinical appearance of sepsis following tonsillitis misled many authors into believing that this infection indicated an entirely new disease. We do not share this point of view, just as we do not believe that angina Ludovici originated only after having been described by Ludwig. Or, by way of quoting another example, the author would call attention to agranulocytotic angina, which was unknown before the publications of Schiulz and Friedemann, and was diagnosed shortly after that in a relatively large number of cases by physicians the world over.

The practitioner must bear in mind that diseases of septic character may occur after tonsillitis. Moreover, he must not feel too sure that an affliction of such type will not develop just because he does not find an affected throat when examining the patient's pharynx. For it is, for the most part, the nature of this disease not to occur immediately after a slight or even severe tonsillitis, but rather after healing of a mild tonsillitis. In fact, septicemia may not develop for several weeks

therefore, in cases in which the physician fears approach of such disease, great importance should be attached to the anamnesis, and patients or their families should be questioned about previous attacks of sore throats.

Where it is a matter of septicemia developing after a peri- or retrotonsillar abscess, the diagnosis will be facilitated considerably by the fact that the patient's voice is somewhat muffled and that frequently lockjaw exists; these symptoms indicate the presence of a retrotonsillar affliction.

The diagnosis of the diseased side in the latter case may be made by simple inspection, although bilateral peritonsillitis may also occur. Moreover, it is not unusual that an apparent stiffness of the neck and torticollis is observed, but this is attributed to the fact that by the rigidity of the inflamed tissue within and behind the parapharyngeal space the patient places his head in a defensive and protective position resembling stiff neck.

Another important diagnostic resource is the tenderness below the angle of the jaw, although here, too, we must not be misled by inflammatory, irritated lymphatic glands. An afflicted jugular vein is not always, as is so often presumed, indicated by a cord like thickening, which the examiner believes to palpate at the anterior border of the sternomastoid, only to find at the operation a completely intact carotid sheath and even an intact jugular vein.

The bad general condition of the patient, the subicteric cyanotic complexion, the dry frequently coated tongue, a frequent soft pulse and chills are distinctly alarming signals of general infection. Absence of chills does not necessarily exclude the presence of septicemia. All ages may be afflicted by this disease, though people in the third and fourth decennium, are preferred.

The blood count also is of great importance in the diagnosis and differential diagnosis. As a rule postanginous sepsis shows a considerably increased number of leukocytes up to 20,000 and more. In all cases, even in minimal leukocytosis, we shall find a definite shift to the left. If this latter does not exist, we may exclude the probability of septicemia. Lack of eosinophiles and appearance of

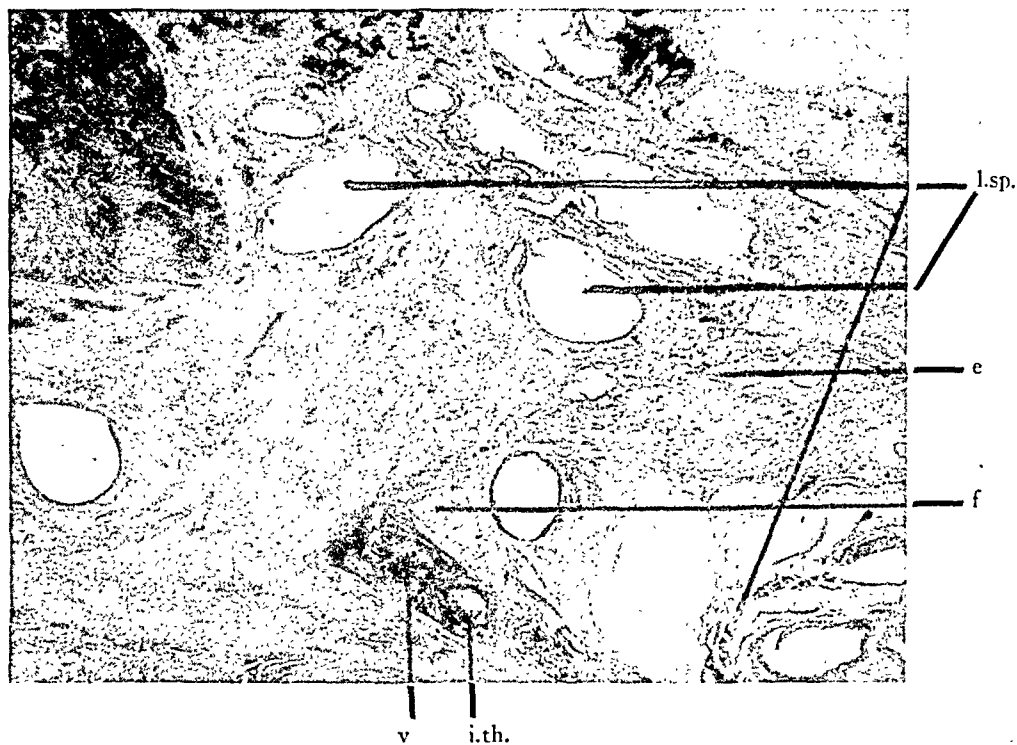


Fig. 4. Phlegmon in the fat tissue with bloodvessel still patent. In the upper part some more cellular inflammation. Extended lymphatic spaces (*l.sp.*) and edema (*e*). Incipient thrombosis (*i.th.*).

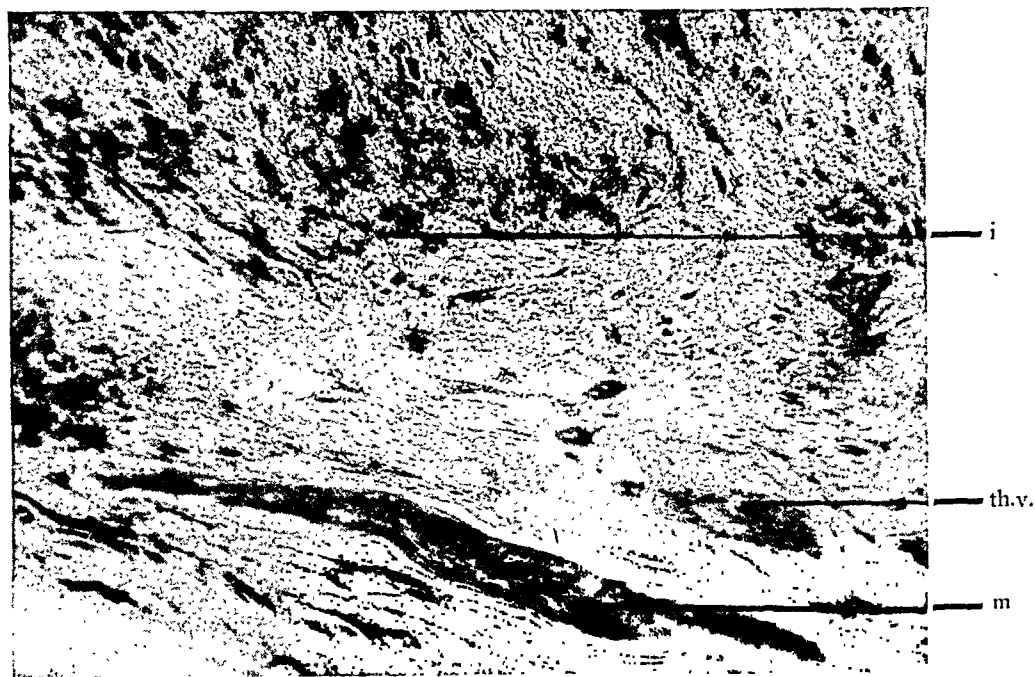


Fig. 5. Inflammatory infiltration (*i*) in the stroma. Muscle bundle (*m*) and thrombosed vein (*th.v.*).

myelocytes in particular is always a serious signal. In advanced cases we frequently find the spleen, and often also the liver, enlarged. Urinalysis shows, at the very beginning of septicemia, changes in form of small amounts of albumin, white and red blood corpuscles, and granular casts. Biliary pigment reaction proves to be positive in the earliest stages.

In differential diagnosis we must distinguish septicemia following tonsillitis from (1) Acute leukemia, (2) agranulocytosis, (3) monocytic-angina, (4) pyelitis, (5) deep suppurations of the neck, which are not caused by tonsillitis, but by various other causes, as for instance dental infection, Bezold's mastoiditis, and so on.

With the help of the blood count numbers (1), (2), and (3) are quickly eliminated, pyelitis occurs more frequently in women than in men and is soon recognized as such by urinalysis.

A careful dental examination will inform us of a possible suppuration of the floor of the mouth, originating in the teeth.

Therapy

We unfortunately know from our experience with otogenous septicemia that medical therapy of such infections is still of very little help, be it the chemo- or sero-, or another medical therapy. Surgical treatment is under the present circumstances the only therapy which promises results. Timely, and, if necessary, repeated blood transfusions using immunized donors, may be of great help.

The operative procedure will be determined by our present knowledge of pathology of postanginous septicemia. The most important step in each case is to open the parapharyngeal space so that all possible abscesses will be evacuated.

Mosher was the first one to perceive the importance of this procedure, and he also showed how to dissect the so-called pharyngomaxillary fossa by an incision behind the angle of the lower jaw or behind the upper edge of the sternomastoid muscle or through the submaxillary gland compartment. He considers the styloid process the guide to the great vessels, as they lie at the same depth as the process and behind it. This seems to be the best way to attack the seat of septicemia. Since

we can never know beforehand whether extended thromboses exist in the veins, we never fail to examine the carotid sheath and its contents by freeing the internal jugular vein far from the parapharyngeal space, following it up from the clavicle. In cases of an acute foudroyant septicemia, where a formation of a phlegmonous seat could not develop in the pharyngomaxillary fossa, but where, according to Fraenkel (in cases, which are less frequent), the septicemia travels directly from the inflamed tonsil through the tonsillar veins, spreading organisms into the systemic circulation, ligation and resection of the internal jugular vein, eventually combined with tonsillectomy, will be our only resource.

Opening of the carotid sheath and removal of highly inflamed glands will frequently also suffice to reduce severe edemas which already extend to the larynx or its surroundings. At any rate, we shall do all we can in order to prevent a tracheotomy in such cases. A tracheotomy means in this in itself so sinister disease always an added and severe complication.

If a phlegmon reaches deep into the throat, we shall make a timely so called collar mediastinotomy (in order to prevent mediastinitis), opening and packing compactly the upper mediastinum behind the scalen muscles.

We operate under local anesthesia, if possible, otherwise in avertin-ether or gas narcosis.

It is, to be sure, understood that the surgical treatment presupposes all embracing knowledge of the topographic anatomy and experience with operations in this region which forms the pathway of such vital vessels and nerves. An extended phlegmon may alter the comparatively simple situs to such an extent that even the experienced will be sometimes confronted with difficulties that the inexperienced find it impossible to overcome.

Our knowledge of tonsillo-genous septicemia has been recently checked and enlarged by investigations, undertaken by Haymann,²² who studied the records of 12,500 consecutive post-mortems.

Among these 12,500 obductions, 53 per cent of the deaths were due to tonsil-

logogenous septicemia; of these 5.3 per cent occurred:

	Per cent
1st decade	3.6
2nd decade	9.1
3rd and 4th decades.....	47.5
5th decade	12.7
6th, 7th and 8th decades.....	27.1

In 20 to 30 per cent both tonsils were affected, in about 30 per cent the tonsil, supposedly causing the septicemia, showed no diseased or even harmless findings.

In 35 per cent peritonsillar or retropharyngeal abscesses were found. This percentage does not correspond with our clinical experience according to which peritonsillar abscesses are infrequently followed by septicemia, i.e., when opened at the proper time. If, however, not opened timely, or incorrectly, danger of septicemia sets in analogous to the epidural otogenous abscesses which do not usually lead to meningitis if their surgical treatment has been timely and correct.

In 10 per cent of the cases transgression of the phlegmon into the endocranium was found, as follows:

In 12 cases there were extended thromboses of the jugular vein, in 3 other cases other veins were thrombosed.

In all cases severe septic changes of the spleen, endocardium intestines, liver, kidneys, and so on, existed. In 63 per cent metastasis were found; and in 68 per cent streptococci were present—

30.5 per cent were pyogenic
25.0 per cent were putridus
7.5 per cent were viridans
12.0 per cent were hemolytic
12.5 per cent were streptococci and staphylococci
5 per cent were hemolytic staphylococci
5 per cent were anaerobic
2 per cent were Corynebacteria

Haymann found as original of tonsillogogenous sepsis in his post-mortem records: 45 per cent direct invasion of the germs into the systemic circulation; 55 per cent indirect invasion of the germs into the systemic circulation.

The duration of the disease was usually a short one; the longest extending over 36 days, the shortest 4 days, in most cases 6 to 14 days.

The hematogenous type ends with death within a very short time.

The lymphogenous type of the disease

usually shows a high continuous curve.

Haymann's statistic investigations of autopsic records supply a much desired supplement of the variegated types of tonsillogogenous septicemia, as we have seen them in our clinical, anatomical, and histological studies. They are in a sense the reflected image of our acquired knowledge. I would like to put special emphasis on the 45 per cent of cases showing direct invasion of the organisms into the bloodstream. These cases approach Fraenkel's statement very closely. We clinicians rarely see or recognize them because the disease makes such rapid strides that the organism has not time enough to prepare the necessary defense or even for the formation of defense signals.

The 55 per cent of the cases due to indirect invasion of the micro-organisms in the systemic circulation by the lymphangitic or lymphadenitic way or in phlegmonous changes or abscesses in the interstitial spaces of the neck, the clinician frequently is able to see, to recognize and to operate upon successfully.

Haymann's statements confirm our clinical and pathologic experiences which have taught us that an early operation is the only salvation for these patients. If this operation is correctly performed it may be better to operate once too often than not at all—an omission which means death to a patient suffering from this sinister disease.

The operative treatment of tonsillogogenous septicemia has produced such good results that surgeons, who at first succeeded in only 30 per cent of the cases operated upon, later experienced series of 50 and even 70 per cent of successes.

Conclusions

(1) Septicemia following tonsillitis is not as rare a complication as many physicians believed in the past.

(2) Septicemia following tonsillitis may originate by direct invasion into the systemic circulation (Fraenkel): (a) Without thrombophlebitic changes; (b) by isolated thromboses of the retrotonsillar veins; (c) by a thrombosis of the jugular vein, extending from the retrotonsillar veins. It may also originate by indirect invasion (Mosher, Uffenorde, and others) into the systemic circulation, detouring over: (a) Lymphangitic or

lymphadenitic processes, (b) phlegmons or abscesses in the interstitial spaces of the neck, especially the pharyngomaxillary fossa with secondary thrombophlebitis, particularly in the internal jugular vein

(3) Direct invasion occurs less frequently and results fatally, because the body has not time to produce a defense

(4) Adequate therapy in these cases may be timely tonsillectomy with ligation and resection of the internal jugular

(5) Indirect invasion occurs more frequently with a more prolonged period of disease. Corresponding to the fact that the source of sepsis in these cases is the deep abscess in the interstitial spaces, drainage of the abscess and ligation and resection of the thrombosed veins is necessary

(6) The prognosis will be better if the diagnosis is made early and operative interference instituted promptly

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References

- 1 Long C W. Excision of Internal Jugular Vein for Streptococci, *Surg Gyn and Obst* Jan 1912
- 2 Goodman Chas. Primary Jugular Thrombosis Due to Tonsil Infection *Ann of Otolaryngology* 26 527, 1917
- 3 Mosher, H P. Deep Abscesses of the Neck *Laryngoscope* June 1920. Maxillary Fossa Approach to Deep Pus in the Neck, *Trans Amer Academy of Ophth and Otolaryngology* 1929
- 4 Fraenkel, E. Ueber postanginöse Pyämie *Virchow's Arch* 254 639, 1925, *Dtsch med Wschr* 52 Nr 3 1926
- 5 Uffenorde. Die Verwicklungen der akuten Tonsillitis, besonderer Berück des Spatium paranasale, *Dtsch med Wschr* 13 357, 1925, *Dtsch med Wschr* 51 2133, 1929
- 6 Walldapfel, R. Die Postanginöse Pyämie *Z Hals usw Heilk* 23 178 1929 *Trans American Academy of Otolaryngology*, St Louis 1928, Venenthrombosen bei Peritonsillarabscessen und lacunarer Angina, *Mtschr Ohrenheilk* 1929
- 7 Joel *Dtsch med Wschr* 51 2133 1929
- 8 Anders. *Verhandlungen der Ges Dtscher H N und O Aerzte*, Leipzig 1931
- 9 Greif. Untersuchung im Halsvenensystem unter besonderer Berücksichtigung der nach Gaumenmandelentzündung entstehenden Formen *Virchow's Arch f Path Anatomie und Physiologie* 281 748 1931
- 10 Hirsch Caesar. Ueber den heutigen Stand der Mandelfrage *Beil klin Wschr* H 340 1924. Ueber postanginöse Sepsis *Klin Wschr* 11 377, 1932
- 11 Rieke. Ueber Gefäßveränderungen im peritonsillären Gewebe bei chronischer Tonsillitis *Z Hals usw Heilk* 22 261, 1928
- 12 Beck, August L. Deep Suppuration of the Neck *Amer Ac of Ophthalmology and Otolaryngology*, 1934
- 13 Wessely *Z Hals usw Heilk* 11 439, 1924
- 14 Claus H. Ueber postanginöse Sepsis, *Z Hals usw Heilk* 18 557, 1927, 21 114, 24 252, Fünf Jahre septische Halsstation der Hals Nasen- und Ohrenabteilung des Rudolf Virchow Krankenhauses in Berlin, *Dtsch med Wschr* 43 1931
- 15 Friedemann U. *Munch med Wschr* 32 1323 1929
- 16 Kissling K. Ueber postanginöse Sepsis, *Munch med Wschr* 28 1163, 1929
- 17 Cheever, David W. *Lectures on Surgery* 487 1894
- 18 Dean L W. The Proper Procedure for External Drainage of Retro pharynx Abscess, etc *Annals of Otolaryngology* p 566 June, 1919
- 19 Crowe, S J. Direct Bloodstream Infection through the Tonsils *Arch Int Med* 33 473 1924
- 20 Dixon. Discussion of Walldapfel's paper *Trans of Amer Ac of Ophth and Otolaryngology* 1928
- 21 Dixon and Helwig. Thrombophlebitis of the Internal Jugular Vein as Complication of Tonsillitis *Annals of Otolaryngology* 39 1137, 1930
- 22 Haymann L. Erhebungen über die tonsillogene Sepsis *Z Hals usw Heilk* 35 288 1934

THE KNACK OF IT

Dr Walter C Alvarez Rochester, Minnesota in a discussion which has been quoted in a number of publications describes the art of the practice of medicine as

'The knack of dealing with the patient in such a way as to gain his confidence his respect, and his liking, it is the knack of inspiring him with the feeling that here at last is a man who understands his case and

will cure him it is the knack of keeping this trust even when things go wrong when health and comfort do not return and when, perhaps, as is the case with many illnesses, things continue to go from bad to worse, and it is the knack of making the patient comfortable and of adjusting the prescribed treatment to his particular idiosyncrasies of mind and body'

VITAMIN D MILK CONTROL .

The Administrative Aspects

PAUL B. BROOKS, M.D., *Deputy Health Commissioner, Albany*

It seems to be generally assumed that if vitamin D milk is to be sold its production and sale should be subject to official regulation and control. The purpose of this paper, therefore, is to attempt to answer the question: "What kind and degree of regulation is necessary or desirable and by whom should it be exercised in New York State?"

In this state there are two official agencies, or classes of agencies, which have joint or complementary jurisdiction in matters relating to milk. The Agriculture and Markets Law, enforceable by the Commissioner of Agriculture and Markets, defines and prohibits adulterations of milk. Under their definition, read literally, milk to which any foreign substance has been added is adulterated. This law also defines and prescribes a penalty for false labeling. You who are health officials are familiar with the authority given by law to the Public Health Council and local boards of health, including that in New York City, to enact health regulations.

Thus far, definite information on some important points concerning vitamin D milk not being available and feeling quite certain that no harm was being done through its sale and use, the departments of agriculture and markets and of health have been "marking time," not interfering with its sale and deferring initiation of control measures. The state sanitary code contains merely the requirements of a special permit from the health officer and that the product, to be sold, must be prepared from milk meeting the code requirements for the grade under which it is sold. On March 14, however, the New York City Board of Health enacted detailed control regulations effective June 1, 1935.

In the meantime the amount of vitamin D milk being sold in the state is relatively small. This probably is due in a measure to reluctance of dealers to take up the venture before they know what the regulations are to be. A rough estimate, based

on information obtained from the patentees, indicates that the amounts produced by the three recognized methods sold daily in the state are approximately as follows:

Oil concentrate method..	6,000 quarts
Irradiation	25,000 quarts
Yeast feeding.....	10,000 quarts
Total	41,000 quarts

Assuming regulation to be necessary, the purposes should be two, the first to insure that the product is clean and safe; the second to insure that the purchaser gets a product that contains what it is claimed to contain and that will do what it is supposed to do. The time may come when all milk will be vitaminized but at present it is generally regarded as a "special" milk. Those who handle it are anxious to create a market and retain it and we probably can safely assume that they will not jeopardize it by using milk of inferior quality. Conceding the improbability of enough vitamin being added to do harm, then our primary concern as health officials is to see that it is so handled that it is not likely to become a medium for the spread of communicable disease.

The yeast-feeding method involves no special processing of the milk. The "processing" is done in the cow. From a strictly public health standpoint, therefore, it requires no special consideration. This method, thus far, in New York State, apparently is being used only in "Certified" dairies.

Irradiation, because of the cost of apparatus, is at present used chiefly in large plants. In such plants in general there is no serious health problem involved in the use of the additional equipment.

The use of oil concentrate, however, involves the addition of a foreign substance but in relatively small quantity. Technically this is an adulteration under the Agriculture and Markets Law. The Department of Agriculture and Markets, however, evidently recognizing that this

is not the sort of thing to which the adulteration provision in their law was designed to apply, has very wisely, as it seems to me, apparently not construed this as a violation. The method has the advantage of flexibility as to the amount of vitamin added. The oil concentrate itself is sterile and the only chance of contamination is in the mixing and addition of the product to the milk. It seems to me that adequate protection is afforded by the provisions now in the New York city code that irradiation and oil concentrate shall be applied only to milk which is to be pasteurized and that the pasteurization shall be done *after* the addition of the vitamin.

The problem of protecting the consumer from exploitation is much more involved. Fortunately it is also not so urgent since the patentees of the various methods, from whom those using them must secure licenses, are organizations of standing anxious to establish and maintain the reputations of the products they sponsor. They maintain laboratory services for making quantitative tests or "bio-assays" and are likely to see to it—certainly while the methods are new and competition active—that their licensees conform to standards.

There are several factors complicating official control, among others the confusion as to the unit of measurement. Several different units have been used, the one most generally mentioned in this country in the past being the so called "Steenbock rat unit." This, in brief, is the amount of vitamin D required to produce a stated degree of calcification when fed to "standard rachitic rats." This effect in terms of calcification, is determined by x-ray examinations. Quite recently the Commission on Biological Standards of the League of Nations has recommended the adoption of the so called "International" unit. Since January 1, 1935 this has been the U. S. Pharmacopoeia standard and is now in general use. The quantitative difference is that one Steenbock unit is equal to about 27 International or "U. S. P. X." units.

For obvious reasons the tests or bio-assays, only approximately accurate, are expensive and time consuming. The cost per assay roughly, varies in different places from \$35 up to \$75. At present

the tests are being made, so far as I know, in only two or three non-commercial laboratories in the state. Since the bio-assays require about three weeks, the reports, when available, relate to conditions as they existed when the sample was taken three weeks before, which detracts somewhat from their practical value.

Since the sale of vitamin D milk, vitaminization being optional, is a commercial venture, it would not seem justifiable to make the tests at public expense. On the other hand, it would not take many tests in the course of a year at the expense of the dealer to absorb all of the profits of the small dealer.

New York City is undertaking to meet the situation by provisions in their health regulations, that samples shall be collected "at such times as the Commissioner of Health deems necessary" to be assayed in a laboratory approved for the purpose, at the expense of the person holding the permit to sell vitamin D milk. The amount to be charged "will from time to time be uniformly set for all laboratories approved by the Board of Health." Failure to pay for the test on demand of the laboratory is declared to be sufficient cause for the revocation of a permit.

While that arrangement probably will be workable in the single New York City jurisdiction, it is another matter in the rest of the state where a large number of separate municipalities are involved, especially as few will have laboratory facilities for bio-assays readily available. It would be a serious and probably unwarranted burden upon the large dealer selling in several different municipalities to be called upon to meet the costs of assays on samples of the same product taken in different places.

Another difficult administrative question is as to what statements as to minimum unit content per quart should be required or permitted on the bottle caps and labels. This involves another question not yet satisfactorily settled, i. e., that of the relative clinical values, unit for unit of vitamin D milk produced by the three methods. It seems to be conceded that the amount of vitamin measured in "rat units" which can be added by irradiation is materially smaller than by "least

feeding" or use of oil concentrate. Hess and Lewis seem to have started the discussion when they published their conclusion that irradiated milk, unit for unit, was more effective clinically than that produced by feeding of irradiated yeast. Other workers have since published data claimed to disprove this.

Prof. E. V. McCollum, in a paper which came to my attention last Fall, questioned whether any of them could be considered to have proven their points. He pointed to the confusion then existing as to unitage standards and values, and believed there had been miscalculations or lack of adequate controls in many of the experiments. He had found no evidence which convinced him that there was any basis for recommending different unitage of vitamin D for children on the basis of its source. His general conclusion seemed to be that as ordinarily prepared and used (considering that infants ordinarily will take from 16 to 20 ounces of milk daily), any of the vitamin D milks would afford protection to what he calls "well children who are not refractory." This implies the possibility that there may not always be enough to cure rickets or to prevent it where there is special susceptibility. He felt that it would be more logical to be satisfied to add generally the minimum amount of vitamin which these "well children" require, leaving it to the physicians to attend to those needing more than the minimum. The latter suggestion appeals to me as sound.

The New York City Board of Health has undertaken to deal with the matter of labeling in a resolution, apparently not a part of their regulations, declaring that "pending further information on this subject" it shall be the policy of the department to require the following minimum numbers of units:

By feeding irradiated yeast.....	430
By irradiation.....	135
By addition of concentrate.....	400

The regulations, elsewhere, require statements of these minimums on the labels. If Hess and Lewis were correct in their conclusion as to the superior clinical value of the vitamin added by irradiation, the sponsors of irradiation should object to this on the ground that the smaller figure (135, as compared with 400 and 430),

will give an erroneous impression of less value in terms of vitamin D. If there is no difference in the clinical value, unit for unit, then those using methods by which the larger numbers of units can be added perhaps are entitled to the advantage which this regulation gives them. These "ifs" still remain to be finally settled. My own tentative opinion as to what should—or should not—appear on the label will be indicated presently.

The final question as to what official agency should assume responsibility for seeing that the purchaser of vitamin D milk gets the number of units claimed and paid for perhaps should have been considered first. If it be decided that this is more properly a responsibility of agricultural than of health authorities, the problem will be simplified for us. In order to avoid conflict and duplication of effort in milk control where jurisdiction seemed to overlap, the Department of Agriculture and Markets and the Department of Health some years ago agreed upon a statement of policy formulated by former Commissioner Pyrke. The substance was that, in general, the Department of Agriculture and Markets should function, in relation to milk, in matters primarily economic; the Department of Health in matters primarily involving protection of health. This policy has been followed fairly closely since, with reasonably satisfactory results.

It may well be contended that the problem of keeping vitamin D content up to the prescribed quantitative standards is primarily economic: seeing that the customer gets what he pays for. At the same time there are arguments on the other side. The value of vitamin D milk is in prevention and treatment of rickets, a public health and medical problem, and depends on a proper unitage standard being maintained. The sub-committee on vitamin D milk of the New York Academy of Medicine, in its report last year, said: "It would seem that the health departments having jurisdiction in matters relating to the sanitary quality and healthfulness of milk would be the logical agencies to assume such responsibility, so far as it is practicable." This was the view of a committee made up largely of physicians. In New York City the Board of Health is handling the matter and, no

doubt, will continue to do so, irrespective of the decision up-state. There would be advantages to the milk industry in having it handled as uniformly as possible throughout the state. I am frankly in doubt as to which would be the wiser and more feasible course and this is something which remains to be settled.

If I were forced to make some definite recommendations today, I would recommend that the State Sanitary Code be amended by adding the following requirements covering the sale of vitamin D milk:

(1) That no milk be labeled or sold as vitamin D milk unless it contained at least 135 U.S.P.X. units of the vitamin per quart (this figure being used tentatively)

but that no statement as to the number of units per quart should appear on the cap or label.

(2) That on demand of the health officer the permittee should produce satisfactory evidence that his product contained not less than 135 units per quart and that failure to produce such evidence within a reasonable time (which might be specified) would be sufficient ground for revoking a permit.

(3) That milk to which the vitamin was added by irradiation or by use of oil concentrate be pasteurized following the addition of the vitamin.

Beyond that I would recommend awaiting developments.

STATE DEPARTMENT OF HEALTH

Discussion

JAMES A. TOBEY, Dr. P.H., New York City: Vitamin D milks of proper potency have been demonstrated by extensive and authoritative clinical research to be effective in the control of infantile rickets and in the promotion of human health. Since these important milk products thus have a definite public health significance, they are subject to reasonable regulation by health departments.

There is no possible danger of an excess of vitamin D from irradiated milk, or from milk produced by cows fed on irradiated yeast, and there is probably no such hazard from a milk properly modified with a concentrate of vitamin D. The chief objective of health department supervision of these milks should, therefore, be to assure the production of clean and safe milks so enriched in vitamin D that the medical profession may prescribe them with confidence and the public may rely upon them as constant and adequate sources of the anti-rachitic factor for the protection of the average individual.

In order to safeguard the public, department of health may impose reasonable standards for vitamin D milk, based on the consensus of scientific opinion, and may regulate the production, sale, and labelling of these products. Such regulation must, however, actually be in the interests of the public health and must not be arbitrary, oppressive, or discriminatory. In these days of immoderate governmental regimentation, there seems to be an unfortunate tendency on the part of some health departments to be too drastic in their current regulations.

Since the licensing power is usually vested in health departments, permits may

be required for the production and sale of vitamin D milks which have been produced and processed in accordance with reasonable standards promulgated by the health department. These regulations should not specify methods in too great detail, but should require satisfactory recording devices in the case of irradiation of milk, and adequate records in the case of "yeast" feeding, and should authorize the inspection, testing, and checking of all methods, devices, and records by health department representatives. In the reasonable discretion of the health authorities, permits may be revoked for good and sufficient cause.

The several processes for the production of vitamin D milks have been more or less completely standardized as the result of numerous laboratory and clinical investigations, so that competent inspection should reveal the efficacy of the operations and the potency of the milk. Since inspection by trained technicians is not always possible for health departments, a further check is desirable, and this can be obtained through the provision for regular bio-assays of the vitamin D milks.

A bio-assay for vitamin D is a technical procedure which can be undertaken only in a well-equipped laboratory. Since few, if any, health departments possess laboratories suitable for such examinations, the bio-assays should be carried out in university or commercial laboratories approved or designated by the health authorities. On behalf of small communities, the laboratory could be selected by the state health department.

Such bio-assays may be required at appropriate intervals within the discretion of

the health department, but generally need not be made more frequently than once every 30 or 60 days. Since these assays are rather expensive, the question arises as to whether the cost should be borne by the health department or the industry. Although fees for milk inspections occasionally have been paid by the industry, the expenses of necessary laboratory tests of milk, water, foods, blood, cultures, and other substances involved in public health administration invariably have been borne by local governments. From the economic as well as the legal standpoint there would seem to be no good reason to deviate from this system in the case of vitamin D milk. If local health departments can not afford to bear these costs, the state should do so.

Scientific bodies familiar with vitamin D milks seem agreed that nothing is to be gained by requiring the number of units of vitamin D to be stated on the labels or caps. Arithmetically, irradiated milk now usually contains a smaller number of USP units of vitamin D than either "yeast" milk or "concentrate" milk, but biologically and clinically the results are the same from an equal quantity of milk. In other words, a rat unit is different from a human unit of vitamin D, and there is at present no reliable standard of potency which is applicable on a comparative basis to the three different types of vitamin D milk.

Many physicians may receive a false impression and the public certainly will be misled by labels stating that irradiated milk contains only 135 USP units of vitamin D, whereas a milk of another type contains 400 USP units. The erroneous inference is that the latter is three times as potent as the former, although actually they are equivalent in antirachitic effect, as demonstrated by numerous controlled clinical studies.

An example of somewhat unsound regulation of vitamin D milk is the code adopted by the New York City Board of Health, in effect on June 1, 1935. Aside from the

ambiguity, defective phraseology, and other serious imperfections of these regulations, they require the placing of a long and involved statement of the source and number of vitamin D units on the already overcrowded bottle caps, and they also require the industry to pay for bio-assays of milk collected at such times as may be deemed necessary. These regulations likewise include evaporated and other concentrated milks, although these products are usually articles of interstate commerce, subject to regulation only by the Federal government. If the various whims of health departments in different cities were to be applied to the regulation of commodities shipped in interstate commerce, a chaotic situation would result.

In order that state and local health departments may be properly guided in the preparation of vitamin D milk regulations, a representative national body, such as the American Public Health Association, acting through its Committee on Milk and Dairy Products, should study the situation and, with the co-operation of the American Medical Association, the Conference of State and Provincial Health Authorities of North America, the appropriate agencies of the federal government, and the International Association of Milk Dealers, prepare a model or standard ordinance or regulation on this subject. Such a standard regulation would embrace all fundamental matters and could easily be adapted to local conditions.

Because of its great significance in the field of medicine and its potentiality as a public health measure for the control of rickets, vitamin D milk is an important advance in dairy science and a significant contribution to preventive medicine. As such, it deserves the sympathetic, but resolute attention of physicians and health officials, to the end that patients and consumers may derive the greatest benefit from vitamin D milks produced and distributed in compliance with adequate but reasonable safeguards.

100,000 TO DEBATE SOCIALIZED MEDICINE

The pros and cons of state medicine will be debated by 100,000 high school students in every state of the Union during the coming year. That number of students on debating platforms means additional hundreds of thousands in their audiences.

The fact that so many will debate state medicine in so many places is due to the workings of a Committee on Debate Materials and Interstate Co-operation, fostered by the National University Extension Association.

Forty states have school debating leagues. Of these, 36 co-operate annually in the publication of a debaters' handbook.

Each year a canvass of debating leagues all over the country produces a list of propositions for debate which is submitted to the materials committee, says *Medical Economics*. This year it offered 31 topics.

At a national meeting in Kansas City the leaders of the interstate co-operative debating group chose socialized medicine from a list of 30 topics.

CASE REPORT

FAVUS IN A NATIVE SCHOOL CHILD

PHYLLIS SCHUYLER KERR, M D, *White Plains*

In the spring of 1934 a boy, age twelve, of Italian parentage came to the dermatological clinic of the White Plains Hospital with a large scaling lesion on his scalp which had been present for two years in more or less the same form. The patient had been treated for ringworm but the condition had been resistant to the usual antiparasitic remedies. Microscopic examination and culture proved that we were dealing with a case of favus.

Favus is a disease that is comparatively rare in the United States. The cases found here are often in people who have emigrated from foreign countries. Favus is not uncommon in Central, Southern, and Eastern Europe and in Scotland. The disorder is moderately contagious and is as a rule, spread by direct contact, but cases have been traced to the handling of infected animals. The scalp is the most frequent site involved but the disease may affect the glabrous skin and the nails. The condition tends to undergo spontaneous cure after many years. The infection almost always leads to permanent loss of hair at the affected sites. By some this is attributed to the mechanical pressure on the roots as well as to the direct invasion of the hair shafts themselves.

The parasite of favus was first described by Schonlein in 1839, and the organism is now referred to as the Achorian Schonleini (achor from the Greek word meaning dandruff). When the hair is placed in potassium hydroxide and examined under the microscope one finds mycelia branching, ribbon-like filaments and spores which vary in size and shape but which are usually relatively large. Within the hair shaft the mycelial threads lie parallel with the long axis of the hair and terminate near the roots. Small bulbules, so called "air bulbules," characteristic in appearance and arrangement are also to be seen.

The patient at his first visit presented the following picture. On the left side of the head a few inches above the ear, was a roughly oval, sharply demarcated crusted area about two inches by three inches in size covered with adherent yellowish scales matted within the crust. The hair was sparse and to a great degree consisted of short matted stubs. The removal of the crust left a depressed surface exuding a serous blood-stained fluid. The usual mousy odor characteristic of the disease was absent. The glands of the neck were distinctly palpable and moderately tender. There were no other lesions or "favids" visible elsewhere on the body.

The case was reported to the Westchester County Department of Health, at the request of which an examination was made of all the children in the school which the boy attended, as well as an investigation of the members of the boy's family. However these procedures failed to reveal any other cases of favus. The source of this particular infection is so far unknown.

The case here recorded is of that type of favus which remains localized and shows no tendency to spread even over long periods of time. While such cases are unusual they are well known.

Favus is essentially a disease of poor, ill-fed and under-nourished people who have little opportunity to pay a great deal of attention to personal hygiene and to matters pertaining to cleanliness.

The identification of this case is of interest first because of the rarity of the condition, second because of the tendency to confuse this disease with the type of ringworm commonly found in school children, and third because as far as is known this is the first case reported in Westchester County.

A plea is here made for the microscopic and cultural examination of all scaling diseases of the scalp in school children.

MEDICAL RADIO BROADCAST

The Medical Information Bureau of the New York Academy of Medicine announces the following radio addresses to be broadcast from Station WABC and the Columbia Broadcasting System network.

Thursday August 8 1 15 P M—Speaker Dr J William Hinton Assistant Professor of

Surgery at N Y Post Graduate Medical School and Hospital of Columbia University
Subject "Ulcers of the Stomach"

Thursday, August 15, 1 15 P M—Speaker Dr Herman Sharlit, Dermatologist at Beth Israel Hospital Subject "Care of the Skin In Summer"

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EDITORIALS

Appointments to the Industrial Council

At the last meeting of the House of Delegates a resolution was passed by which a Committee was set up to work out the qualifications of the physicians who should take position, by appointment of the Governor, upon the Industrial Council. The Committee appointed by the President presented to the Executive Committee at its last meeting the qualifications as follows:

The physician shall have a license to practice in New York City with registration to date; he should have been practicing at least ten years; he should have a good general reputation in the community and should indicate a good average ability in the practice of medicine; he should be conversant with the Workmen's Compensation practice but *not employed* in any capacity by insurance companies or carriers, or be actually engaged in the practice of industrial medicine or surgery; and lastly, he should not be employed by the State in any public health activity or in any paid capacity.

Pursuant to these qualifications, on July 5, Governor Lehman appointed Dr. W. D. Johnson of Batavia, Dr. E. C. Podvin of the Bronx, Dr. Horace E. Ayres of New York City, Albert W. Bailey of Schenectady, and Dr. William Linder of Brooklyn. All meet the quali-

fications as outlined above. They become members of the State Industrial Council which acts as an advisory body to the Industrial Commissioner on all matters having to do with the Department of Labor. Particularly will these men represent both the organized profession and those not within its ranks in matters concerning the new Workmen's Compensation Law.

The character of the men appointed, their very high ethical standard, and their fine relations to the profession are a good omen. Under their guidance it is hoped that the new law will work out not only to the benefit of the injured workmen, but also for the good of industrial medicine. It is matter of congratulation that the co-operation between organized medicine and the Governor has resulted in such a fine Commission.

The Professional View on Publicity

Upon their own initiative or at the instigation of their organizations, officials and directors of welfare organizations and endowed funds often attempt to work out problems which are the vital concern of organized medicine.

From the manner in which they publicize their findings and opinions it would hardly be realized that the medical profession is engaged and deeply concerned.

not so much with academic consideration of the problems, but with a living actuality and practicality in delivering a great social service to the whole community.

We are often astounded at the methods of publicity employed to propagandize half-developed ideas seemingly backed by factual data. Too often, instead of inviting the organized profession to the council table for a full and free discussion and debate of the mooted questions at issue, the general public is talked to in an effort to popularize the ideas put forth. This has been the unfortunate state of affairs in recent years in many instances whose details need no recounting. The views and findings thus publicized become distinctly protagonistic; while the honest doubts and critiques as well as the considered judgment of the organized profession almost invariably become accepted by the public, which sits in at the debate, as frankly hostile and antagonistic. Thus a situation develops in two groups in our population, both of which are devoted to a common cause, which could have been obviated.

Wide differences of opinion do not necessarily mean that mutually acceptable common ground cannot be found in the cool calm of philosophical reasoning. Were they who feel the urge to make efforts to better the condition of mankind to debate their schemes with us *before* inviting the public's participation in assimilating the projected ideas, perhaps a formula might be found acceptable to all concerned with the problem. Then, and only then, should the public be asked to hear the proposition. For, as far as medicine is concerned, the public is in no way competent either to judge its quality nor know how best medical service shall be made available to it.

Allied Education

Both profession and public can look for many concrete benefits when the Council on Medical Education of the A.M.A. has completed its study of schools for occupational therapists, laboratory and physical

therapy technicians. Although there are hundreds of institutions within these categories, to date there is no system of classification comparable to that for the approval of medical colleges. Many honest students go to widely advertised institutions under the impression that they are qualified schools and are turned out to prey upon the public with no adequate educational foundation for the responsibilities they must face. A list of acceptable schools would assure the well intentioned technician of adequate training and place the seal of charlatanry upon graduates of unapproved institutions.

The investigations of the Council embrace physical facilities, organization, faculty, records, requirements for admission, curriculum, advertising and administrative methods. They entail personal inspection of plants as well as detailed study of records, statistical data and curricula. This is a laborious task and is still far from completion after almost two years of work. A list of approved schools cannot be compiled until the essentials for each of the fields in question have been formulated.

It bodes well for the ultimate outcome of this study that it was initiated in thorough harmony with representative organizations of the groups concerned. As a matter of fact, the American Occupational Therapy Association, the American Society of Clinical Pathologists, and the American Physiotherapy Association were instrumental in inducing the A.M.A. to undertake this task. There is no doubt that its results will benefit qualified technicians in these fields beside conferring a greater degree of security on patients employing such services.

Fair Play for Interns

In the month of July several thousand recent graduates in medicine entered upon internships constituting the final educational step in their preparation for private practice. Many of these young men and women will receive no monetary compensation for this arduous apprenticeship.

The lucky ones who are paid will get a mere stipend. Such is the tradition of their profession, however, that one and all are grateful for the opportunity to supplement their theoretical knowledge with practical experience, even at the price of delaying financial productivity for another year or two.

The return on which these young graduates count for their many services is training, in both the spirit and practice of their profession. It is up to every staff member no less than to administrative officials to see that each intern receives his full educational *quid pro quo*.

Obedience is essential in an intern but his primary purpose is to acquire experience and judgment. A just and generous staff can do more by example and encouragement, to temper initiative with discipline, to combine keen observation with discreet action, to instil habits of careful thoroughness, than years of didactic admonition.

Organized medicine does its part for the intern by investigating available openings and listing approved opportunities. On the hospitals devolves the obligation to supply adequate physical facilities and see that necropsy requirements, and so on, are strictly observed. The transmutation of occurrences into experience, of factual knowledge into an instrument of judgment—the most difficult task of all—is most likely to be accomplished under the guidance of a sympathetic, liberal, visiting staff which understands the problems and educational needs of the medical tyro.

Dinitrophenol

For many years the medical profession has sounded repeated warnings against the indiscriminate use of drugs for the purpose of bringing about a rapid reduction in body weight. Unsupervised and unregulated dieting has also come in for its share of criticism. Despite the pleas made for the exercise of sanity in the management of obesity, the public still demands measures which will take off the

most weight in the least possible time. Most of the nostrums and "cures" have been exposed to the laity. The public realizes the dangers of using thyroid extract without the controlling supervision of a physician. When a new remedy is advanced which seemingly is successful in the treatment of obesity, the tragedies which accompany its use do not become evident until the delayed reactions from its ingestion are studied and reported.

The drugs which are employed for the purpose of reducing weight are mainly those which bring about an acceleration of metabolism. As early as 1885, dinitrophenol was known to produce quickening of the metabolic rate.¹ Its toxicity was also well known, and reports of poisoning among munition workers who came in contact with the chemical are on record. Its use in connection with weight reduction is recent (1933), but within the past two years this has spread enormously. In spite of the note of caution sounded by the Council on Pharmacy and Chemistry of the American Medical Association,² which, by the way, has recently *rejected* dinitrophenol "as unacceptable for inclusion in new and nonofficial remedies," the uncontrolled sale and use of this dangerous drug is on the increase. Commercial preparations are already on the market for sale to the public.

Following its introduction as a means of reducing obesity, numerous reports of its toxic effects have appeared. These include skin eruptions, disturbances in taste and smell, functional disturbances of the liver and heart, agranulocytosis, peripheral neuritis, rapidly developing cataracts and cases of acute poisoning.³ This accumulation of evidence would

¹ Cazeneuve, P., and Lepine, R.: *Comp. rend. Acad. d. Sci.*, 101:1167, 1885.

² *J.A.M.A.* 105:31, 1935.

³ Anderson, H. H., Reed, A. C., and Emerson, G. A.: *J.A.M.A.* 101:1053, 1933; Sidel, N.: *J.A.M.A.* 103:254, 1934; Bohn, S. S.: *J.A.M.A.* 103:249, 1934; Silver, S.: *J.A.M.A.* 103:1058, 1934; Nadler, J. E.: *J.A.M.A.* 105:12, 1935; MacBryde, C. M., and Taussig, B. L.: *J.A.M.A.* 105:13, 1935; Boardman, W. W.: *J.A.M.A.* 105:108, 1935; Horner, W. D., Jones, R. B., and Boardman, W. W.: *J.A.M.A.* 105: 108, 1935.

prompt advocacy of the absolute discontinuance of dinitrophenol as a medicinal remedy, or, on more sober consideration, at least insistence that its sale be prohibited except upon a doctor's prescription, until more has been learned about its pharmacology and therapeutic indications. Certainly its extreme toxicity and its possible use as a suicidal agent should be ample reasons for suitable restrictive legislation. The proprietary articles containing this drug should be taken off the market, invoking the Food and Drug Act if necessary, so that the future ill effects of dinitrophenol may be reduced to a minimum.

Vaccine Therapy and Amyloidosis

The amyloid change in certain organs of the body which is observed in connection with chronic infections and malignancies is still a problem which will require further investigation before a definite conclusion can be reached regarding its *raison d'être*. That these changes also occur in multiple myeloma has recently been described by Magnus Levy.¹ Some attribute these amyloid diseases to disturbances of the reticulo endothelial tissue but the preponderance of experimental and clinical observations points to an increase in the blood proteins as the probable etiological factor.

Amyloid changes in the organs can be produced readily in mice which are fed large quantities of casein over an extended period.² Similarly, intramuscular injections of sodium caseinate for a period varying from eight months to a year will result in the death of rabbits from amyloid disease.³ In these experimental animals, the blood globulin, during the period of observation was found increased two to four times over the normal figures. Pathological studies made on the

organs of horses used for the production of serum, showed amyloidosis in 80 per cent of those examined.⁴ Furthermore, it has been possible deliberately to produce these changes in animals by repeated and continued injections of vaccines, toxins, casein, albumin, peptone, and other agents.⁵

It is known that the injection of vaccines results in an increase of the proteins in the blood, particularly in the amount of circulating globulin. In all probability, this is due to the abnormal stimulus which the injected substance exerts on cellular activity, thus increasing the rate of production. Whether the amyloid substance is the result of a deposit or precipitate of these proteins in the tissues is still a moot question, and the presence or production of abnormal proteins remains to be determined before any definite clue to amyloidosis is found.

From experimental work by themselves and others, Reimann and Eklund³ feel that a causal relationship exists between hyperglobulinemia and the eventual manifestations of amyloid disease. They advance as a basis for this contention a clinical report of a case of chronic rheumatoid arthritis who had received 41 injections of streptococcus vaccine over a period of 22 months and who subsequently developed both clinical and pathological manifestations of amyloid disease of the spleen, the kidneys, and the liver. While the exact etiological factor in this case is not clear, the extreme rarity of amyloid changes in rheumatoid arthritis suggests the vaccine therapy this patient underwent as the plausible offending factor in view of the proven ability of vaccines to produce these changes in animals.

The practicing physician hardly ever encounters amyloidosis as a sequela of a course of vaccine therapy. The possibility of its occurrence should, however, be borne in mind, particularly when a long course of treatment is indicated and un-

¹ Magnus Levy A. *Ztschr. Klin. Med.* 116: 510, 1931.

² Kuczyński M. H. *Arch. f. Path. Anat.* 239: 184, 1922.

³ Reimann H. A. and Eklund C. M. *Ann. J. Med. Sc.* 190: 88, 1935.

⁴ Doerkin E. *Arch. f. Path. Anat.* 286: 487, 1932.

⁵ Bailey, C. *J. Exp. Med.* 23: 773, 1916.

dertaken. In these instances, careful observations for the earliest signs of amyloid changes are necessary in view of the reported investigations, and the vaccine treatments should be discontinued at once when these symptoms become manifest.

An Educator Speaks

It has been a common argument of the proponents for pure socialism in medicine—namely, that the people shall have medical service entirely gratis supported by taxation in a system similar to the educational system of the state—to claim that then as much good would devolve for both the public and the profession as has resulted to the public from the educational law, whereby all the young of the state come under its educational system and the teachers are paid by the state.

In Hearst's *International Cosmopolitan* for August, Arthur E. Brown, A.B., Pd.D., on page 6 under the heading "The Next Fifty Years," makes a notable contribution. He says:

The private and independent schools of the United States were and are the pioneers that blaze the trail of education in our great democracy. From them the public school system has taken certain patterns, but the function of reaching out for new ideas, new methods, better facilities, still remains the high privilege of the private school. Here in smaller groups every child is an entity; here every child may receive inspiration and instruction peculiar to his needs; here there need be no mold, no standardization, no repression of individual talent and aspirations. . . . An amazingly large percentage of the leadership in all realms of endeavor has come from the private school and college during the past half century. If the people of our country are to continue to rise to a higher plane of living and thinking, it will not be under a regimented, czaristic régime, but under a system of education and training where there is freedom for growth and development in harmony with the inherent strength and ability of the individual. . . .

One could paraphrase this quotation and apply it in its entirety to medicine. One could say that the large, amazing percentage of leadership in research and

in hospital function in the care and in the development of preventive medicine have not come from the ranks of those in the regimented profession anywhere in the world, but have come from the free initiative of private practice and private study all over the world, where medical men have worked as individuals, and have treated the sick entrusted to their care, individually. The problems of conquering disease, learning its secrets, and blazing trails into new fields has been individual, and not regimented endeavor.

CURRENT COMMENT

THE MEDICAL PROFESSION has often grumbled at the fee it pays for annual re-registration to practice. The fine activity of the attorney generals attached to the State Department of Education as revealed in recent activity makes the costs to the profession worth while.

In the section of the State about Binghamton, there have been fourteen arrests and arrangements of chiropractors. It cannot be too often brought to the public's attention that chiropractors are illegal practitioners in this State. We congratulate the State Department of Education on this effort to protect the people from those who would prey upon their gullibility.

THE NEW YORK STATE Sanitary Officers' Association elected the following officers for the year 1936: President, Chalmer J. Longstreet, M.D., Binghamton; Vice-President, Myron M. Metz, Williamsville; Second Vice-President, Charles G. Lenhart, Spenceport; Third Vice-President, Leo. F. Schiff, Plattsburg; Treasurer, Geo. K. Krice, Fairport; Secretary, Guy H. Turrell, Smithtown Branch, L. I.

THE PART PLAYED by animals in the study of scientific medicine and the value of the knowledge accumulated by this means, particularly with reference to cancer, are graphically presented in the latest publication of the New York City Cancer Committee, entitled, "On Health's Highway." It is based on the concept that the greatest advances in medical and surgical knowledge throughout the centuries have been dependent largely upon the results of animal experimentation, and that any restrictions placed on these methods would be most unfortunate, particularly in relation to cancer research.

IN VIEW of the recent floods in the central

portion of the State, all are reminded of Chapter II, Regulation 7 of the State Sanitary Code, to wit—that outbreaks of diarrhea and gastroenteritis *must be reported by telegram or telephone*. All are urgently requested to comply fully with this regulation and to lose no time in reporting the occurrence of an unusual number of diarrheal cases—(*Health News*, Vol 12, No 28 July, 1935)

THERE WILL BE HELD in Brussels from September 12 to 19 a Post Graduate meeting. A second session will be held at Spa. In Brussels, the topics will be cancer, tropical, sub-tropical, and infectious diseases, the therapy for Parkinson's postencephalitis, and a commendation to Pierre and Marie Curie. At Spa, the topics discussed will be diseases of the cardiovascular system and diseases of the blood. The meeting takes place under the presidency of Prof Dr F Heger at Brussels and under that of Dr H Schultin at Spa. Among those taking part are found the names of distinguished men like Prof Dustin of Brussels, Prof Blumenthal of Belgrade, Prof Ascoli of Palermo, Prof Bauer of Vienna, Prof Berredka of Paris, Prof Carulla-Riera of Barcelona, Terence Cawthorne of London, Max Cohen of Chicago, and Dr Albert Hyman of New York.

"POLITICIANS have no right whatever to give away other peoples' property or services, and they have no special desire to do so. They are constantly being besieged by schemers to further unsound propositions, and the charity racket is not the least of their worries. The medical profession has every reason to be alarmed about socialism in general, and state medicine in particular. In Europe these have brought misery to millions of people, and there is no reason why we should repeat these errors."—(Fred D La Roche, M.D. Springfield, Mass, *Medical Record*, July 3, 1935)

IN THE NEW YORK TIMES of Sunday, July 14, an Englishman, Sir Josiah Stamp made some pertinent comments. "We have," he declares "no adequate appreciation of what a skilled administration means. One cannot safely legislate beyond the capacity of experienced administration to execute." It is not enough to "pass acts perfect in drafting and principle," there must be "enough skilled administrators drawn from various types of public service to carry them through."

We medical men should keep this in mind when we study schemes of socialized medicine and health insurance.

We must not accede to legislative acts which will place on the statute books laws beyond the capacity of the medical profession to administer.

A GLANCE at the *London Times* of June 23 would sound familiar to medical readers. Headlines like "Out Patients Who Abuse Hospitals," "Work Filched from Doctors," "Waste of Time and Money" are examples.

Briefly, Dr Alfred Cox, former secretary of the British Medical Association, when speaking at the opening of an extension of the Wilson Hospital, Mitcham, said:

I regret that many hospitals deliberately encourage the use of their out patients' department by all and sundry, who regard it as a place to get a cheap or gratis bottle of medicine and to enjoy a chat over the old complaint with the habitual hauntings of such places.

This is encouraged so that the hospital in appealing for subscriptions, may boast about the large numbers of out-patients, whereas they ought to be ashamed of them.

It is like using a steam hammer to crack a nut to use a hospital for such purposes, and a shocking waste of the subscribers' money and the doctors' time.

The hospitals encourage people to apply for charity when the thing they need can be quite well supplied at their own cost.

If they find difficulty in paying doctors' bills they can in any part of London, and in most large centres, now get the doctor of their own choice, without any suspicion of charity, through the public medical service, which provides them with a family doctor on easy terms.

The out patients department has had a very bad effect on the doctors who have to live by their practices, which the out patients departments are poaching from them.

These doctors, finding much of their work being filched from them naturally become less interested in their profession, less experienced in their practice, and, therefore less useful to the public they are supposed to serve.

THE NEW YORK TIMES of July 17 says:

Business recovery is apparently being reflected in public benefactions. The first half of the present year in five big Eastern cities and in Chicago saw 40 per cent more money distributed in public gifts than in the corresponding period last year. President Butler [of Columbia University], some time ago expressed the opinion that the age of great private philanthropies had passed. Colleges, hospitals and other institutions must henceforth look to public funds for the bulk of their endowments.

Was the President of Columbia University a little too downhearted? The future is still uncertain and for more than one reason. Even if we win back to old time prosperity, there is the new sharing and soaking taxation philosophy. If the government takes the lion's share of all big fortunes it is obvious that the owners of big fortunes will have neither the ability to give generously nor the reason for giving.

Society Activities

Workmen's Compensation Committee

COMMUNICATION No. 6, JULY 15, 1935

The Amended Law Is in Effect. Transition from the old to the new is in progress. Forms, rules, interpretations, etc., are in the process of formation. A few weeks will elapse before the complete establishment and operation of all provisions can be fully attained. Please remain patient and co-operative.

Authorization of Physicians. In general, the work of the County Medical Societies has been highly commendable. Within the past week the Commissioner's office has begun sending out the individual cards accompanied by certain instructions. Physicians who have filed their applications and who have been passed by the local committee or board may engage in the care of injured workmen until further notice to the contrary.

Authorization by Employer. We advise that in the case which requires a service in excess of \$25.00 (above \$10.00 for x-ray or laboratory work) that the employer's authorization be obtained. Advise this Committee of the refusal of any employer to give authority.

If Employee is Discharged because he has exercised his right of "free choice" of a physician for the care of a compensable injury—please advise this Committee, giving full details.

48 Hour Notice, C4., etc. Until forms are available, use your personal letterheads: give names and addresses of employee and employer, statement of cause and character of injury, and care given or proposed. Make this in triplicate: send one to the Industrial Commissioner, one to either the employer or his insurance carrier (the latter if known), and file one for your own reference. Do the same with the C4 form within 20 days of the first treatment of the patient—these forms may be obtained from the Industrial Commission. The 48 hour notice is being designated as form C104.

Fees and Bills. For the present, charge according to the same schedule of fees which has prevailed previous to July first. A schedule of "minimum fees" is being developed in conference with the various interested parties. It will require considerable time to complete this work and the Commissioner cannot announce the schedule until it has been done. We advise that bills be rendered promptly with the conclusion of the care of each case. The Law provides

for either payment or protest within thirty days.

Hospitals Cannot Charge or Collect for Medical Care. Sec. 13-f, Chapter 258, says—

Payment of medical fees. (1) Fees for medical service shall be payable only to a physician or other lawfully qualified person permitted by section 13-b of this chapter to render medical care under this chapter, or to the agent or to the executor or administrator of the estate of such physician. . . . Hospitals shall not be entitled to receive the remuneration paid to physicians on their staff for medical and surgical services.

Sec. 13-d, prescribes the conditions upon which the Commissioner shall remove a physician from the list of those authorized to render medical care under this chapter. Among which conditions for removal are (13-d par. 2 (e)), a physician who "has participated in the division, transference, assignment, rebating, splitting or refunding of a fee for medical care under this chapter." Each physician, therefore, must render a separate bill for his personal services.

Contract Doctors. The status of "compensation medical bureaus" is in status quo ante, pending the establishment of definitions, regulations and interpretations by the Industrial Council. In these and in "rehabilitation clinics" only, does the Law permit employment of physicians "on a salary basis." In connection herewith, the action of the House of Delegates of the American Medical Association at Cleveland is pertinent:

It is unprofessional for a physician to dispose of his professional attainments or services to any lay body, organization, group or individual, by whatever name called, or however organized, under terms or conditions which permit a direct profit from the fees, salary or compensation received to accrue to the lay body or individual employing him.

Those physicians who have "hospital contracts" must accept the conditions of the Law. If adjustments of their contracts are involved, that must be a personal matter. Collection of the physician's fee by the hospital is a violation of this chapter—and must not be done. Private contracts cannot nullify the specific provisions of this chapter of the Law.

X-Ray Fees. Hospitals cannot collect for the services of the physician roentgenologist. He must render his own bill. (Competent authority has determined that the pure cost of materials, overhead, etc., should be not

more than 33 1/3% of the total fee for x ray examination when such service is performed in an institution which enjoys the tax exemptions, special discounts, etc., of hospitals.) We are of the opinion that the Council will rule that the roentgenologist may reimburse the hospital for the "pure cost" of materials and facilities, without transgressing the prohibitions of 13 d 2 (e).

Pathologists Determination of 'pure cost ratio' is under consideration

Solicitation Writing of letters circulars, cards etc., will be interpreted as a violation of the prohibition of solicitation of Sec 13 i. We advise that physicians be warned

DR CHARLES GORDON HEYD *Chairman*

DR DAVID KALISKI

DR FREDERIC E ELLIOTT

Memorandum from the Department of Labor

The following is advice and instructions to physicians authorized to treat workmen's compensation cases under provisions of chapters 258 and 930 of Law of 1935

1—If you rendered treatment to a patient for a compensable accidental injury or an occupational disease that occurs on or after July 1st, 1935 the employer or his insurance carrier is liable for payment of your bill

2—You may not charge less than the minimum fee established by the Industrial Commissioner unless you are employed on a salary basis by a licensed compensation medical bureau (a schedule of the minimum fees established may be obtained from your County or State Medical Society or from this office) (Sec 13-d (d) Chapter 258) (Sec 1 sub a—Chapter 930)

3—You will not be entitled to a fee in excess of the minimum charge provided in the schedule unless the employer authorizes it or the excess is approved by the Arbitration Committee referred to above (Sec 13 (a)—13 a Chapter 258)

4—Your bill for services rendered should be submitted to the employer and it will be deemed fair in the amount rendered unless a hearing is requested within thirty days. If a hearing is requested the fair value will be decided by an Arbitration Committee whose findings will be binding on all parties (Sec 13 g Chapter 258)

5—Your patient may transfer his care to another authorized physician. If he does you should supply the succeeding physician with a complete history of the case (Sec 13 a)

6—The employer has the right to remove a patient from your care (a) if the interest of the injured employee necessitates a transfer or (b) if you have not been authorized under the Act to treat the particular injury or condition (Sec. 13 a(3))

If you believe the employer or insurance carrier was unreasonable in transferring the patient from your care you may appeal to the Arbitration Committee and if successful you will be entitled to a sum equal to that paid the succeeding

physician, or such portion of it as the Arbitration Committee deems adequate

7—You must submit a preliminary report (Form C 104) to the Division of Workmen's Compensation and to the employer within forty eight hours after you render the first treatment and a more detailed report (Form C 4) within twenty days after the first treatment (enclosed is a small supply of both of the forms referred to) *Your bill may not be valid or enforceable if you fail to submit these reports to the Division of Workmen's Compensation and to the employer within the time limit, (the twenty day report (Form C 4) the title of which is*

Attending Physician's report shall not be required unless requested if treatment is not necessary after the forty eight hour report (Form C 104) is submitted)

8—If treatment extends beyond the date upon which the twenty day report is submitted you should submit progress reports at intervals not exceeding two weeks and a final report when the patient is discharged from treatment

9—You must send a copy of all reports submitted to the employer or his insurance carrier to the Division of Workmen's Compensation. You must place your authorization number with symbols on every report submitted. To insure prompt consideration of your bill it is suggested that you send a copy of every report to the employer's insurance carrier if known

10—The employer and his insurance carrier shall have the right to examine your patient at reasonable and convenient times and places. You may be present at such examinations. You should urge your patient to submit to such examinations as his failure to do so may deprive him of compensation during the period of his refusal (Sec 13 a (4) (Sec 13 j))

11—Fees such as specialists consultations surgical operations, or physio-therapeutic procedures costing more than \$25 shall not be enforceable against an employer unless such services shall be authorized by the Employer or by the Commissioner, or unless such authorization shall be unreasonably withheld or unless such special services are required in an emergency. This rule and its exceptions apply to x ray examinations or special diagnostic laboratory tests costing more than \$10 (Sec 13 a (5))

12—Medical care may be rendered by a registered nurse, registered physio therapist or other persons trained in laboratory or diagnostic technique within the scope of their training only under the active and personal service of an authorized physician. These services shall be evidenced by signed records of instructions for treatments and signed records of the patient's condition or progress (Sec. 13 a(c))

13—You may not collect or receive a fee from a claimant for compensation but shall have recourse for payment for such services rendered only to the employer (Sec 13 f(1))

14—You will be entitled to a fee for attendance at a hearing on a claim for compensation if you have rendered treatment and your attendance is required (Sec 13 f(2))

15—Your authorization to treat workmen's compensation cases may be revoked for cause specifically (a) if you are found guilty of professional or other misconduct or incompetency in

connection with medical services rendered under this chapter; or, (b) if you have exceeded the limits of your authorized professional competence in rendering medical care under this chapter, or have made materially false statements concerning your qualifications in your application for authorization which you filed with your County or State Medical Society; or, (c) if you fail to submit full and truthful medical reports as required; or, (d) if you render medical service under this chapter for a fee less than fixed by the schedule approved by the Industrial Commissioner for your particular locality; or, (e) if you participate in the division, transference, assignment, rebating, splitting or refunding of a fee for medical care under this chapter; or, (f) if you solicit or employ another to solicit for professional treatment, examination or care of an injured employee in connection with any claim under this chapter. (Sec. 13-d (2).)

One of the most important functions of a physician under this Act is to keep proper and adequate records and submit proper

and detailed reports promptly. Your compliance with these requirements will eliminate unnecessary delay in the payment of compensation to the injured workman and unnecessary hearings on the claim by this Department. Your failure to keep proper and adequate records and submit detailed reports promptly will delay adjudication of the claim which will cause undue hardship on the injured employee whom the Law was primarily intended to benefit.

To insure proper filing you are urged to write the name of the patient and employer clearly and distinctly with correct spelling.

ELMER F. ANDREWS
Industrial Commissioner

NOTE: All questions and communications regarding the Workmen's Compensation Law should be addressed to the Committee on Workmen's Compensation, Room 557, 2 East 103rd Street, New York City.

The Joint Sub-Committee on the Deaf and Hard of Hearing

A SUB-COMMITTEE OF BOTH THE COMMITTEE OF PUBLIC RELATIONS
AND THE COMMITTEE ON PUBLIC HEALTH AND MEDICAL EDUCATION

Co-operation of the medical profession is earnestly sought by this Committee. Since its activities are chiefly concerned with children, the attention of pediatricians, family physicians and physicians active in school health work is especially desired.

The Committee's objectives are two: (1) Conservation of hearing in all children. (2) Raising the standard of otological care of children in schools for the deaf.

The Committee advocates an annual school hearing program for all children, with the purpose of early discovery of potential, as well as permanent, hearing impairment. It is well known that many cases can be cleared up by medical care promptly given and that many others may be arrested or improved by means of treatment. Neglected cases suffer a heavy life handicap which limits earning power and induces numerous personality problems. These misfortunes may be prevented if early discovery is made the rule and if parents are encouraged to refrain from concealing a condition which some feel to be disgraceful.

The pre-school child should be examined for hearing defects in order that proper steps may be taken to correct or check the progress of the condition at the earliest possible age.

This committee urges co-operation with the State Department of Education Hearing Program which includes a hearing test

for all school children. Those found defective will be examined by otologists who recommend the treatment to be carried out. Provision will be made in the schools for children found to be hard of hearing. Those with hearing losses sufficient to warrant it will be placed in special classes with lip reading instruction and such aids as may be required. Special schools are not for the moderately deafened child. All cases of impaired hearing in children should be reported to the Bureau for Handicapped Children.

Children who are completely deaf present a different problem. These children include the congenital or heredity types, as well as those who lost usable hearing before speech was acquired.

Children found to be deaf and in need of special care should be reported by physicians to the Bureau of Special Schools of the State Education Department for admission to a school for the deaf. There are seven such schools in various parts of the State available to the public school child. At present they are caring for about 1,700 children who are totally deaf or very hard of hearing. The Committee feels that it has made some progress in bringing about an improvement in the otological supervision of the children in these schools.

A. J. HAMBROOK, M.D., *Chairman*
FAIRFAX HALL, M.D.

County Societies

Albany County

COURT ACTION of Dr Thomas Parran, Jr, State Commissioner of Health, to oust Dr Daniel V O'Leary as Albany Health Commissioner was officially abandoned on July 2. Notice was filed in the county clerk's office of the discontinuance of action. The State Health Department sought Dr O'Leary's dismissal on the ground that his public health experience did not meet the requirements laid down by the Public Health Council.

Erie County

THE ERIE COUNTY MEDICAL SOCIETY and the Buffalo Board of Health have united in a joint campaign to eliminate venereal disease. For the campaign the State has appropriated \$10,000 and the Common Council of the city has added \$12,000.

Franklin County

DR LEROY U GARDNER, director of the Saranac laboratory, was awarded the Trudeau Medal at the general meeting of the National Tuberculosis Association at Saranac on June 24, for making the greatest contribution to tuberculosis work during 1934.

The convention was the largest on record, with well over 1,000 delegates present.

Kings County

DR CLARENCE H BEILLINGER assumed his duties on July 1 as superintendent of the Brooklyn State Hospital. He succeeds Dr George W Mills, who has been transferred to the newly organized Creedmoor State Hospital in Queens, formerly a branch of the Brooklyn State Hospital.

Dr Bellinger said his administration would make changes "only when I feel that the situation requires it and that benefit is to come therefrom."

"As time goes on," he explained, "changes will have to be made, especially when we open the new nineteen story addition. There will be no radical changes, however, for I am most fortunate in having come to a place well organized for the care and treatment of mental patients."

AN INTERESTING PROBLEM in the medical relief work was brought into the open in July by the protest of Dr Samuel L Solomon of 418 Neptune Avenue, Coney Island, who charged that the home relief medical service was "disrupting" his practice by

sending other physicians to his patients, although the patients had asked for him.

He said that if home relief medical service did not remedy the condition he would protest to the Kings County Medical Society.

Dr Solomon explained that he had asked to be put on the city's list of home relief physicians about a year ago, when many of his own patients had gone on relief. Many of these patients, he said, continued to go to him, the city paying him small fees for their care. On June 27, Dr Solomon said, he received the following letter from Dr Charles McCarty of the home relief medical division:

"During the last month you have received an unusually large number of home relief calls, apparently because your patients request your services. There has been an uneven distribution of work among the physicians of your district.

"In the future request calls will be honored, provided the number of requests for your services does not exceed the average number of calls assigned to other doctors in the same vicinity. There is no objection, however, to your treating favored patients gratis if you so desire."

Dr Solomon, in his reply to Dr McCarty, asserted this ruling violated FERA regulations, which state there should be an agreement by local relief administrations "to recognize, within legal and economic limitations, the traditional family-physician relationship."

"You are depriving my patients of my services," Dr Solomon said. "You are taking my practice that has taken years of painstaking effort to build up and you are turning it over to another doctor, and even paying him to take it from me."

"In a few cases," it was explained at the Emergency Home Relief Bureau "physicians have received more than a proportionate number of calls and in fairness to the other physicians in our service who are subject to calls at all hours of the day and night at a rate generally lower than their regular fee, we feel we cannot discriminate in favor of one or two doctors at the expense of the others."

"Whenever a family wishes to have its family physician, we agree. But in a very few cases it seems a doctor gets a disproportionate number of such calls. In all such cases when the doctor runs over his quota, we ask him, 'Are you willing to take this case gratis or should we pass this case on

to some one else?' In almost every such case the physician, mindful of his responsibility to his patients who paid him when they were able to afford it, takes the case gratis. This is the first such protest ever made by any doctor."

THE BAY RIDGE MEDICAL SOCIETY feels there is no need at the present of a free clinic or hospital in Bay Ridge and has so informed the Citizens Committee for the Establishment of a Clinic in Bay Ridge. Announcement to this effect was made by Dr. Gustave Nadel, representing the Citizens Committee.

Dr. Nadel was informed by Dr. Ralph Garlick, president of the Bay Ridge Medical Society, that the society had adopted resolutions in which it was asserted that there are sufficient facilities for the needy of Bay Ridge and that it was unnecessary to have a free clinic.

Dr. Nadel then quoted Dr. John J. Masterson, former president of the Kings County Medical Society and an active member of the Bay Ridge Medical Society, as saying that patients in Bay Ridge seeking aid can be treated in clinics at the Norwegian, Israel-Zion, the Methodist Episcopal, the Samaritan and even the Coney Island hospitals. None of these clinics are overcrowded, and all can accommodate patients day and night.

Monroe County

DR. FRED J. GARLICK was elected President of the Rochester Pathological Society at its annual picnic meeting at the Newport House on Irondequoit Bay on June 27. Other officers elected were: Vice-president, Dr. J. P. Henry; secretary-treasurer, Dr. J. J. Rooney; trustees for one year, Drs. N. D. McDowell, A. G. Morris, W. D. Ward, J. W. McCauley and C. G. Reitz; councillors for three years, Dr. E. B. Angell and Dr. H. T. Williams. The retiring president was Dr. S. J. Appelbaum.

DR. WILLARD M. ALLEN, of the University of Rochester School of Medicine faculty, who recently was awarded the Eli Lilly prize of \$3,000 in biological research, is in London to serve on the Biological Standardization Commission of the League of Nations.

New York County

THE NEW YORK DIABETES ASSOCIATION, a division of the New York Tuberculosis and Health Association, is now building a program of support to those engaged in work against diabetes. Following the soundest public health precedent, the New York Diabetes Association is engaged in survey-

ing all existing facilities. It is felt that this survey, when completed, will be of the greatest value in co-ordinating efforts in this field. All this information will, of course, be at the disposal of hospital and dispensary authorities and of the professional workers in general. It is hoped that those in charge of hospitals and dispensaries will co-operate to the fullest extent with the workers of the New York Diabetes Association.

New York County

THE ADVANTAGES of having two doctors on an ambulance was seen in June, when Doctors Benjamin Glick and Anthony Nicosia of City Hospital received minor injuries on the face and legs when the ambulance in which they were riding collided with a truck at 51st St. and Second Ave. They stopped long enough to treat one another's injuries and just a little longer to see that the driver of the truck was served with a summons, then continued on their way.

Onondaga County

DR. J. G. F. HISS, associate professor in the Syracuse College of Medicine, Syracuse university, is attending the International Physiological Congress in Leningrad and Moscow.

Dr. Hiss will read a paper and give a demonstration on the subject on which he has been working with Dr. Robb, the physiological importance of the individual muscles of the heart. Two hundred doctors from the United States as well as doctors from all over the world are expected to attend the congress.

Rensselaer County

THE ANNUAL OUTING of the Medical Society of Rensselaer County was held June 26 at Luther's White Sulphur Springs Hotel, Saratoga Springs. Games were played in the afternoon and a chicken dinner served in the evening.

Rockland County

DR. JOHN D. KERNAN of New York City, who has a summer home in West Nyack, delivered an interesting address on nose and throat ailments and the use of the bronchoscope to remove foreign bodies from the throat, at the June meeting of the Medical Society of the County of Rockland at the Rockland Country Club, Sparkill, with 40 members in attendance.

Three new members, Dr. George Galpin of New City, Dr. Roger Reid of Letchworth village, and Dr. Alfred Moscarella of Spring Valley, were elected to membership. Dinner was served.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Revocation of License Obtained by Fraud

The power of a licensing board to revoke the right conferred by it on a physician to practice was the subject of an interesting case* recently reviewed by the Appellate Courts of one of the Pacific Coast States.

The proceedings under review were instituted by a complaint filed by the State Board of Medical Examiners, in which Dr. R. was charged with having obtained a reciprocity certificate and license to practice medicine by fraud and misrepresentation. The specific charge was that R. had in his application for a license stated that he possessed a diploma from the S. College of Physicians and Surgeons, and that he had fulfilled all the preliminary education required under the licensing statute, whereas in truth and in fact he did not have the diploma in question and had never obtained a bona fide certificate of preliminary education, but had purchased what purported to be such a certificate.

A hearing was had upon the matter and R., although having received proper notice, did not appear. It was shown upon the hearing that R.'s application recited three years of study in a European university and study from 1904 to 1908 at S. College of Physicians and Surgeons, and that from the latter institution he had obtained a degree of Doctor of Medicine on April 27, 1908. He had represented that he had passed the June, 1920, written examination given by the State of M. and that he had been certified by the Board of Health of the State of M. as a fit and proper person to receive a reciprocity certificate to practice medicine.

The testimony of a certain Dr. A. was introduced which was in substance as follows: That he had been student solicitor for S. College of Physicians and Surgeons and had met R. in 1918. At that time, according to Dr. A., the accused had told him that he wanted to graduate in medicine and go through the way a certain friend had. He had asked the solicitor how much it would cost him and was told that a high school certificate and credits for four years in medicine would amount to \$1,000. They agreed upon \$800 which was paid over. Dr. A. then obtained for R. from an assistant

superintendent of public instruction for \$15 a certificate of high school credits, and from a doctor in another city a certificate of four years' education in another medical college, for which \$300 was given. The two certificates were delivered to R. who then explained that he had no medical training whatever and the two presented the certificates to the dean of S. College of Physicians and Surgeons. R. was enrolled and may have to some extent pursued his studies there for one school year, and again with the assistance of a Dr. A. in preparing certain papers he was graduated from the College.

In addition, the testimony of a certain deputy state superintendent of public instruction of the State of M. was put in evidence. He swore that he had made out a certificate of preliminary education for R. and had had it signed with a batch of others by the state superintendent, and that he had dated it back several years to suit the requirements of the arrangement.

Other evidence showed that from 1918 to 1921 the offending doctor had been teaching music and leading a band, during part of which time he was supposed to be studying medicine, and certain affidavits signed by R. were identified which recited his alleged record of educational training.

The board of medical examiners upon the said record found that a material portion of the charges of the complaint were established and ordered R.'s license to practice medicine revoked. The order was annulled in an intermediate court, and the Board carried up on appeal to the District Court of Appeal, which reinstated the ruling of the Board. In so ruling the Court said in part:

We are not unmindful of the repeated declarations in decisions of our Appellate Courts that the rights of a person to practice a profession for which he has prepared himself is property of the very highest character, entitled to protection by such safeguards as the law has thrown about it. On the other hand, the power granted by the Legislature to the Board of Medical Examiners to revoke licenses previously issued to applicants is sustained upon the ground that the Legislature has authority under its general police power to provide all reasonable regulations that may be necessary affecting the public health, safety, or morals, and

* *Rinaldo vs. Board of Medical Examiners*, 42 Pac. 2nd, 724.

with this object in view to provide for dismissal from the medical profession of all persons whose principles, practices and character render them unfit to remain in it. Among these provisions of law authorizing a removal or revocation is that of fraud or misrepresentations in procuring the license to practice. The very foundation of the property right hereinabove mentioned is preparation leading up to the qualifications essential to the safety of the public. To meet the exacting tests now generally required before one may follow the medical profession, one must devote years of arduous effort and closest application to acquire the requisite knowledge, skill, and experience to warrant his license to practice. Any fraud or misrepresentation in the application upon which such a license is granted, resulting in giving appearance of qualification to one who does not in fact possess it, is sufficient under the law to warrant revocation of such license. A review of the evidence adduced before the board in this case shows that the board had sufficient competent evidence before it to warrant the exercise of its power to revoke respondent's license.

Death by Leaping from a Window

A married woman about 40 years of age consulted a general surgeon with respect to complaints of abdominal pains. This examination resulted in the diagnosis of a gallbladder ailment and he suggested an operation. As a private patient she entered a hospital and was given a private room on the seventh floor. The doctor put her under a spinal anesthesia and upon opening her abdomen found adhesions of the gallbladder and free fluid about the appendix. He removed the gallbladder and appendix and she was returned to her room in satisfactory condition. The day following the operation she suddenly became very irrational and tried to get out of bed. She made an attempt to go to the window; she was put back in bed, put into a strait-jacket and carefully watched by the nurses and house physicians. Various sedatives were given to her and the following day she seemed to be resting quietly in bed when suddenly she again displayed irrational symptoms and without warning made a leap from the bed and jumped out of the window.

The surgeon was notified and he found that she was suffering from multiple frac-

ture and lacerations as well as shock. Her condition as a result of the fall was hopeless, and within two days she died.

An action was brought against the defendant physician upon the theory that he was negligent in permitting the plaintiff to be kept in a bed in the hospital in close proximity to a window which was not properly closed and barred; that he did not properly provide adequate attendants upon the patient to prevent her from injuring herself, as a result of which it was claimed that the defendant doctor was responsible for the death of the patient. The case came on for trial and at the close of all the testimony the judge directed a verdict in favor of the defendant, exonerating him from all responsibility in connection with the woman's death.

Burn Discovered Subsequent to Operation

Dr. X, a general surgeon, was treating a patient for subacute appendicitis. After a particularly severe attack the patient was placed in a private sanitarium and under a general anesthesia her appendix was removed. While the patient was in the hospital Dr. X saw her daily. About the third day postoperative, the surgeon was told by a member of the patient's family that the patient's ankle was bothering her. An examination revealed external redness with one or two blebs. The doctor advised dressing and made a diagnosis of a first degree burn. The patient had a normal recovery postoperative and left the hospital about eleven days after the operation. There was a slight infection of the burn which cleared up, leaving only a slight discoloration.

The patient subsequently sued the doctor and upon the trial of the case it was proved that immediately postoperative a nurse, following the usual routine care, placed a hot-water bag upon the patient's foot. This was done after the patient had been removed to bed—but not under the direction nor supervision of Dr. X. After this proof was elicited on behalf of the defendant at the trial, the court directed a verdict in favor of Dr. X.

The detail man waxed eloquent concerning a certain compound. The doctor objected to two of its constituents.

Said the salesman: "Don't you believe that both are valuable drugs?"

"Yes, surely," replied the M. D.

"Then what is the objection?"

"Well, I'll tell you. I am fond of raw oysters, and I like maple syrup but I don't

mix them. What God hath put asunder, let no man join together."—*Adopted from the Weekly Bulletin—St. Louis.*

Kid: "You've got a lot of pep for an old geezer. How do you get that way?"

Old Timer: "I ain't decided yet. I'm dickering with two or three of them patent medicine concerns."—*Medical Reporter.*

Across the Desk

WHAT will the American face of the future be like? The nations of Europe have developed characteristic faces, at least to an extent where it is possible to caricature them on the stage and in the comics. But the American face is still in the making, with the outstanding lineaments of our mingled old world ancestries struggling for supremacy. Almost any style of nose, jaw, ears, and other trimmings may emerge.

But, happily for us, at this critical hour, the science of plastic and reconstructive surgery has appeared on our national scene, and inspires the hope that in the not-distant future the liberty-loving American will be at liberty to take his face to the plastic surgeon, who will "grasp his sorry scheme of things entire, and mold it never to the heart's desire." The futile attempt of Dilinger to alter his face beyond recognition by the federal sleuths has brought this matter sharply into public attention. Mr. John Edgar Hoover, Director of the Federal Bureau of Investigation of the U. S. Department of Justice, has issued a warning to surgeons, through the *American Journal of Surgery*, not to aid in any way in changing the features or fingerprints of criminals.

No such warning was necessary, of course, for reputable surgeons, and, equally of course, criminals with big money will be able to find medical and surgical blacklegs to undertake any work of that sort desired. What will be the result? Well, for one thing, the chief wish of the thug is not to look like a thug. No doubt what he would like most would be to look like an honest man. The blackleg surgeon, then, will study to construct features that show character, integrity, idealism. May we look forward to the time when the parade of prisoners at Sing Sing will reveal a group of men who remind the onlookers of William E. Gladstone, Marcus Aurelius, and Aristides?

Fine features are desirable, too, in business and social life, and the young business man may think it worth while to have his lineaments tinkered a bit here and there to help him present a good "front." Rival beauties striving to outdo each other in frantic revisions of facial contour conjure up possibilities that make the brain reel.

The nose is what strikes the eye first, we might say. And Dr. Jacques W. Maliniak, a distinguished worker in the science, said in a recent address that "any type of nose can be strikingly changed by the endonasal route. The dimensions of the nose can be

changed in all its diameters, the bridge can be raised or flattened, the contour of the nostrils can be altered. When extensive changes are made, there are corresponding alterations in the contour of the adjoining parts." The nose, then, can be made as graceful as a Greek god's or as distinguished as the Iron Duke's.

"Lend me your ears," said Mark Antony, who perhaps did not like the ones he had. Today he could have them altered to suit. "The ear," says Dr. Maliniak, "can be changed in all its most characteristic points. Its size can be altered symmetrically by excising fragments of skin and cartilage, the lobes can be joined to or detached from the cheeks," and the resulting scars cleverly concealed.

"Face lifting" is of course quite familiar now. Dr. Maliniak adds that "scars, birthmarks, tattooing, etc., once prominent features of the Bertillon system of identification, can now be almost completely eradicated, and for the most part without conspicuous scarring. The deformity is excised and the surrounding skin undermined and stretched to cover the defect.

"There can be no doubt of the possibility of effectively disguising the appearance by means of plastic surgery and the police should co-operate with reputable plastic surgeons to prevent the use of this specialty for such purposes. In suspicious cases the surgeon should verify the patient's identity and address before operating. A list of legitimate reconstructive surgeons should be on file with both local police and the Department of Justice. When a dangerous criminal is being hunted, particularly if he has a striking facial trait whose obliteration would make sight recognition difficult, the descriptive circular issued by the police could be sent to plastic surgeons to put them on their guard."

A much larger field, however, is opened to the plastic surgeon by our huge toll of automobile wrecks, and a field, too, where there are no legal or ethical doubts to give him pause. Detroit is our motor capital, and Dr. Chure L. Straith of that city read a paper before his State Medical Society last September on rebuilding faces torn and crushed in the impact of crashing cars. The present annual toll of more than a million injured in these accidents indicates the importance of the problem. The riders are usually thrown forward, against the windshield or the instrument board, and the

face is cut and bruised. The present high traveling speed and "the increase of 100 to 300 per cent in intoxicated drivers" have caused "a great increase in very severe facial injuries."

The worst sufferer, it seems, is the guest passenger in the front seat, usually a young girl or woman. In a collision her face is often thrown violently against the upper edge of the instrument panel, with distressing results. "The upper jaw is usually fractured, nasal bones are crushed downward and outward, cheek bones forced inward, and, not infrequently, the eyeball or frontal bones are injured." It appears, indeed, that these injuries are so typical that they are called "guest passenger injuries." They may leave grotesque deformities if not treated with the greatest care and skill, and to help solve this problem Dr. Straith outlined his methods of treatment, with pictures showing the *modus operandi* and the fine results attained. His experience is that "those who have been rehabilitated are often more grateful than others who have been literally snatched from the jaws of death."

It is clear that this science, art, or combination of the two, is merely in its infancy. What coming generations will be able to do to their features is beyond our ken, a matter for dreams. The merest glance at any passing throng shows that in many cases something needs very much to be done; in fact, is a stiff challenge, a dare, to any plastic surgeon who thinks he can plant beauty where none grew before. Some master workman will make these dreams come true, and write his name on the roll of immortals who have blest mankind. The prophets of old were fond of the expression, "Go to, now," and a reading of the context seems to indicate that what they meant was the same as our modern saying, "Go to it," and if we can catch the splendid spirit of those old worthies, we

may say to our plastic brethren: "Go to it, now!"

STRANGE THINGS appear in court proceedings that perhaps explain why Justice is shown in court-house statuary blindfolded, as if she cannot stand it to see what is going on down below in the court room. A Chicago physician interested in certain cases was amazed to see a medical "expert witness" appear, qualify and testify "as an expert psychiatrist in one court, as a surgeon in another, as an expert in roentgen diagnosis in another, and as an expert in pediatrics in a fourth court, *all during one afternoon, and on the same floor in the Cook County Court House.*" Dr. I. S. Trostler, who tells of this in *Radiology*, also heard that the same versatile witness "qualified and testified as an expert in pathology the next morning." Medico-legal procedure in court today "is often nothing but burlesque," said Dr. Ramsay Spillman, in a paper read before the Society of Medical Jurisprudence in New York City and published in the *American Journal of Surgery* in October last. And, he added, dryly, "while burlesque seems to have a place in the great social scheme, I hold that medical science has no place in burlesque." County medical societies, of course, could take a hand in cleaning up this situation, but Dr. Trostler would put selection of expert witnesses and the admission of expert testimony more in the hands of the courts. Presiding justices, in his plan, would choose the expert witnesses from a list approved by the local or state medical societies for such service. "If such a method were followed, it will be readily seen that much less biased, corrupted, prejudiced and/or perjured medical testimony would be introduced and given; honesty and justice would be furthered and everything would be better, except the few hangers-on who derive their living from their nefarious trade."

CORRECTION

On page 679 of the issue of July 1, 1935, under the heading "Doctors Form Equity Association," the paragraph beginning "The Executive Council includes—" was inaccurate in that some of the physicians mentioned are not in fact members of the Council of the Physicians Equity Association of America, Inc. We wish to correct this error by giving the names of the Council of that Association as supplied to us officially by its Executive Secretary, Mr. Edward J. Kelly. These are: Stanley Brady, M.D., William E. Butler, M.D., Malcolm Campbell, M.D., Joseph E. Conroy, M.D.,

William M. Cooper, M.D., Edward R. Cuniffe, M.D., John Staige Davis, M.D., Cassius L. DeVictoria, M.D., George A. Fiedler, M.D., Judson C. Fisher, M.D., Seymour Fiske, M.D., David Geiringer, M.D., Charles Goodman, M.D., Harold Hays, M.D., Clifton W. Henson, M.D., Samuel M. Kaufman, M.D., Willis W. Lasher, M.D., Locke L. Mackenzie, M.D., Herman B. Philips, M.D., Morris Rosenthal, M.D., Joseph Safian, M.D., Herman Sharlit, M.D., Clarence Smith, M.D., Robert Emmet Walsh, M.D.

Books

REVIEWED

Hygiene for Freshmen. By Alfred Worcester, M.D. Octavo of 151 pages. Springfield, Charles C. Thomas [c.1934]. Cloth, \$1.50.

This little volume, though it has but 151 pages, is replete with information. Based on instruction given to the freshmen at Harvard University, it may be considered a text on elementary physiology as well as hygiene. From this brief volume the physician may learn how to simplify his medical explanations to patients. There is a list of questions at the end of each chapter.

Those interested in public health instruction are referred to the concluding paragraphs of Chapter 8 for the word picture of the story of alcohol.

S. ZWERLING

Surgical Clinics of North America. Published every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 issues). Cloth, \$16.00; Paper, \$12.00.

Vol. 14, No. 1, February, 1934

(Philadelphia Number)

This issue comes from the pens of Philadelphia surgeons. Most of the names are familiar to the readers of the clinics. All the articles are of practical value and are satisfactorily illustrated. The February number is entirely up to the usual high standard of this publication.

Vol. 14, No. 2, April, 1934

(New York Number)

The 30 authors of this issue have attempted to meet the problems of general surgery by presenting a number of typical cases and offering tried and tested solutions to the various questions raised and debated in the medical press at the present time. All of the 35 presentations are of great practical value. They are well illustrated and are interesting reading.

Vol. 14, No. 3, June, 1934

(Mayo Clinic Number)

The Mayo Clinic presents a comprehensive, cross-section of the excellent work done at that institution. The material is well diversified, excellently illustrated, and didactically important. Of particular interest is the treatment of inoperable carcinoma of the stomach. Also an article relating to the various conditions amenable to the resection of the presacral sympathetic

nerves. Other departments of surgery are adequately covered.

Vol. 14, No. 4, August, 1934

(Chicago Number)

This issue contains 34 articles covering the entire field of general surgery and includes a very instructive symposium on plastic surgery; also a symposium on peptic ulcer. The text is concise and clear. The articles on gallbladder surgery are particularly instructive, as are the articles on parathyroidism with concomitant bone changes. The surgical treatment of tuberculosis is dealt with by Hedblom and Van Hazel in a splendid manner. The volume is typical of the high literary and educative standards adhered to by the editors and publishers.

GEORGE WEBB

Periodic Fertility and Sterility in Woman. A Natural Method of Birth Control. By Prof. Hermann Knaus. Octavo of 162 pages, illustrated. Vienna, Wilhelm Maudrich, 1934. Cloth, \$6.50 post free.

The work of Knaus, heretofore available only in German journals, is wonderfully well presented in this attractive, amply illustrated volume. Easily read, clear, logical, and well supported by ingenious well controlled experimental proof, it is a summation of all his papers on this subject.

The author's law summarizes all his work: "In women with normal reproductive physiology, ovulation always takes place on the fifteenth day before the onset of the period." He believes that the ovum is extremely short lived, hours only, and that spermatozoa lose their fertility well within forty-eight hours, in only three days of the cycle then is pregnancy possible, the ovum is probably never fertilized if it has to wait for the spermatozoon.

Of Ogino, whose name is usually coupled with his, he says that "certain third parties have grossly misrepresented their contributions." If the times of ovulation and conception are to be fixed in terms of the calendar it is obvious that they must be counted forward from the last menstrual period. Dickinson and Frank, he says, have approved the existence of a safe period, then denied it.

Gynecologists will appreciate this book. Everyone should read it, as an excellent and authoritative discussion of an important sub-

ject. The menstruation calendar in the form of a life time record for any women is ingenious, simple, and practical. In the United States and Canada this book may be had from the Concip Company, Hobart, Indiana.

CHARLES A. GORDON

Human Personality and the Environment. By Charles MacFie Campbell. Octavo of 252 pages, illustrated. New York, Macmillan Company, 1934.

Just as the personality represents an expression of the total forces of the individual, so does its analysis require the resources of not only the psychoanalyst, but also of the physicist, the chemist, the anthropologist, and the biologist. It is therefore difficult for any one investigator to analyze competently a personality.

The practitioner, however peculiarly fortunate he may be in possessing the necessary material for the study of personality, rarely concerns himself with such study either because of his too specialized approach to his subject, or because his main efforts lie in correcting an emergency situation. It may be that he instinctively realizes that such a careful study might prove too exhaustive and too exhausting, in so far as it must encompass the influences of family discords, spiritual tendencies, thwarted hopes, business reverses, and other complexities of mind and of body. And yet the physical comfort which the patient expects from his physician is often hastened by some consideration and appreciation of his psychic conflicts.

We must admit that the family physician was better able to study his personalities through prolonged contact than in the clinic where patients are known by mere numbers.

This book is an inspiring study to the subject of personality, and if it can but arouse the physician-reader to avoid the pitfalls of a mechanized approach to the patient, it shall have well served its purpose.

EMANUEL KRIMSKY

The Life of Sir Robert Jones. By Frederick Watson. Octavo of 327 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$3.75.

Sir Robert Jones of Liverpool, England, the outstanding medical luminary during the World War, had a life crowded with pleasure. The pleasure of a simple kind: in love with his work, surrounded by friends, and in his later years showered with honors. He is only dead two years, but in his fifty years of active surgery he was admired by the medical profession throughout civilized countries, not the least by North American surgeons, and especially

by those from the United States. No less a master surgeon than John B. Murphy of Chicago was thrilled by his ability, technic, and results.

A sport-loving man he was, fond of boxing in his youth, of cricket in his old age, a good horseman, a crack shot, and a wonderful host, a man who kept open house in Liverpool, and treated each and every guest graciously, a gentle, kind, loving sort of gentleman.

His greatness was in his development through tedious effort of the care of the crippled child, the industrial worker, the wounded soldier, and the World War veteran, and the establishment throughout England of Orthopedic Centers for the rehabilitation of the cripple.

The book gives a graphic description of the high spots in Sir Robert's career. It is entertaining, instructive, and inspiring.

DONALD E. McKENNA

Medicine & Mysticism. By R. O. Moon, M.D. 12mo. of 57 pages. New York, Longmans, Green & Company, 1934. Cloth, \$1.00.

Remarkable indeed it is how some historical personages could cloak their influential teachings in such authoritative language without really saying anything of worth. It is more remarkable how the modern doctor pays his respects to these characters, when, as a matter of fact, the same mystics, supposedly dead and forgotten, continue to live in our midst as outcasts from our ranks. In death we call them mystics, in life, they are fakirs.

That science and mysticism have nothing in common goes without saying. But that the medicine of yore was unscientific makes the perpetuation of these old mystics excusable and offers colorful reading.

EMANUEL KRIMSKY

Minor Surgery in General Practice. By W. Travis Gibb, M.D. Octavo of 429 pages, illustrated. New York, Paul B. Hoeber, 1934. Cloth, \$5.00.

This is one of a series of monographs for the general practitioner, which are published under the editorial supervision of Dr. Thomas L. Stedman. The author has, in this reviewer's belief, written a fair book on Minor Surgery for the general practitioner.

The volume contains about 430 pages, including 148 illustrations and an index. The illustrations are black and white sketches and portray the text exceedingly well.

One criticism that may be offered of this volume is that at times the author has devoted too much space to historical events, for a single volume.

There are perhaps better books on this.

HERBERT T. WIKLE

**THE APPLICATION OF DIAGNOSTIC CRITERIA TO
THE TREATMENT OF THE ANEMIAS**FRANK H BETHELL, M D, *Ann Arbor Michigan*

The present trend of investigation of the anemias consists essentially of an effort to determine the fundamental factors in their causation, to correlate these factors with the morphologic changes of the blood, and to devise means either of eliminating the causes or of compensating for them. It is quite accurate to consider the cells of the circulating blood as a part of the organ from which they are derived. Accordingly, the erythrocytes should be regarded as the final product of the red blood cell forming tissue in the bone marrow, released at maturity to fulfill their function as conveyors of oxygen to the tissues. The simplest hemoglobin determination, perhaps a mere casual inspection of the patient, may disclose the presence of anemia. The mechanism of such anemia often lies in the developing cells of the bone marrow, although the discovery of its cause may require the investigation of apparently unrelated organs or metabolic processes. Morphologic methods are of prime importance in the diagnosis of the anemias, not as ends in themselves, but as a means of ascertaining the nature of the basic pathology.

The study of the circulating erythrocytes utilizes three quantitative values and their various relationships (Figure 1). These are (1) the number of red blood cells per unit of volume, (2) the amount of hemoglobin present, usually expressed in percentage of an assumed normal, but more accurately defined as the number of grams contained in 100 c c of blood, and (3) the size of the individual red blood cells. Dividing the hemo-

globin value, expressed in grams, by the red blood cell count, yields the average red cell content of hemoglobin, or the mean corpuscular hemoglobin. Expressing this quantity in relation to the normal gives the color index. The hematocrit makes possible the determination of the total volume of red blood cells occupying a unit of blood. Dividing this value by the number of red blood cells calculated to occupy the same unit of blood gives the average size of the individual red blood cells or the mean corpuscular volume. This quantity expressed in relation to the normal yields the volume index. The hemoglobin value divided by the hematocrit determination gives the percentage of the average red blood cell volume occupied by hemoglobin, or the mean corpuscular hemoglobin concentration which, in relation to the normal, may be expressed as the saturation index.

An equivalent reduction in the number of red blood cells and the hemoglobin without alteration of erythrocyte size, is the immediate effect of loss of blood, by hemorrhage or hemolysis. It also may result from a decrease of erythropoietic tissue, as in the case of aplastic anemia or from a depression of blood formation, such as occurs in association with infections or with chronic nephritis. Such a blood picture indicates no intrinsic defect in the developmental process of the erythrocyte.

Alterations of the mean corpuscular hemoglobin, volume or hemoglobin concentration, or of the various indices, invariably signify an abnormality of eryth-

From the Thomas Henry Simpson Memorial Institute for Medical Research and the Department of Obstetrics and Gynecology of the University Hospital, Ann Arbor, Michigan. Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 14, 1935.

rocyte development.^{1,2} Lowering of the color index with or without the appearance in the blood stream of small erythrocytes indicates a retarded rate of hemoglobin synthesis. Delayed hemoglobin formation may be absolute, when the availability of its constituents is inadequate, or it may be relative, when the rate of erythrocyte production is accelerated beyond the capacity of the hemoglobin to keep pace. The latter situation occurs during recovery after acute loss of blood. A decrease in the average size of the red blood cells may logically be regarded as an attempt at compensation for the reduced supply of available hemoglobin, and as an indirect result of stimulation of the blood forming organs by the demands of the body.

of some substance required by the developing erythrocyte or its constituent hemoglobin.

Ordinarily, an adequate diet supplies in abundance the materials necessary for the building of hemoglobin.³ Iron, although quantitatively the smallest part of the hemoglobin molecule, is the component most likely to be deficient. In the adult such deficiency is probably never solely the result of insufficient dietary iron; it may be induced by depletion of the iron reserves through continued loss of blood, by defective absorption of iron in the presence of little or no free acid in the gastric secretion, and finally by an increased demand for iron such as occurs in pregnancy. Very frequently two or more of these factors are present simul-

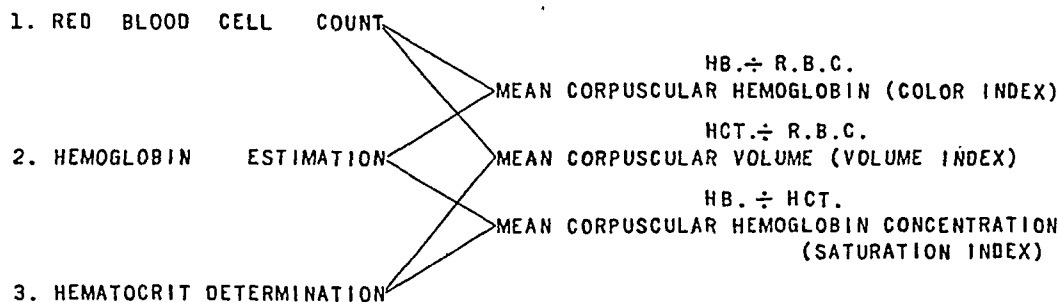


Fig. 1. Relationships of three quantitative values utilized in the study of the circulating erythrocytes.

On the other hand an elevation of the color index above normal always accompanies an increase in average erythrocyte size, since red blood cells never become super-saturated with hemoglobin. Such a blood picture indicates a retardation of the development of the erythrocyte, an interference with its normal maturation.

Determination of the hemoglobin concentration or saturation index, in conjunction with the size of the red blood cells may point to a combination of deficiencies in the causation of the anemia. Thus the occurrence of large cells containing less than their normal quota of hemoglobin suggests both retarded maturation of the erythrocytes and inadequate formation of hemoglobin, possibly the result of pernicious anemia complicated by chronic hemorrhage.

Consideration of therapy will be limited to those anemias dependent upon a lack

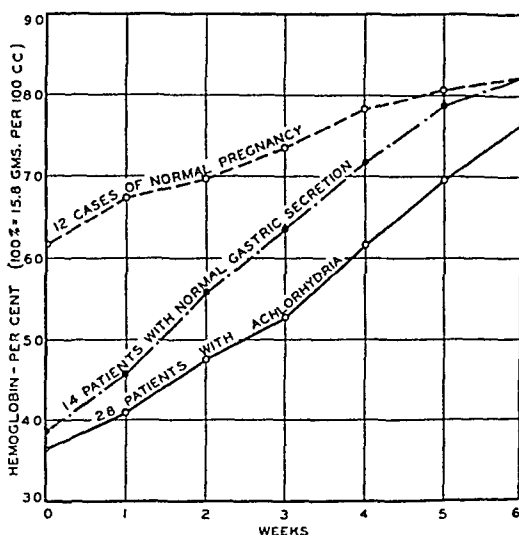


Fig. 2. The effect upon the hemoglobin following administration of iron to patients with simple anemia with (1) normal gastric secretion, (2) achlorhydria, and (3) pregnancy.

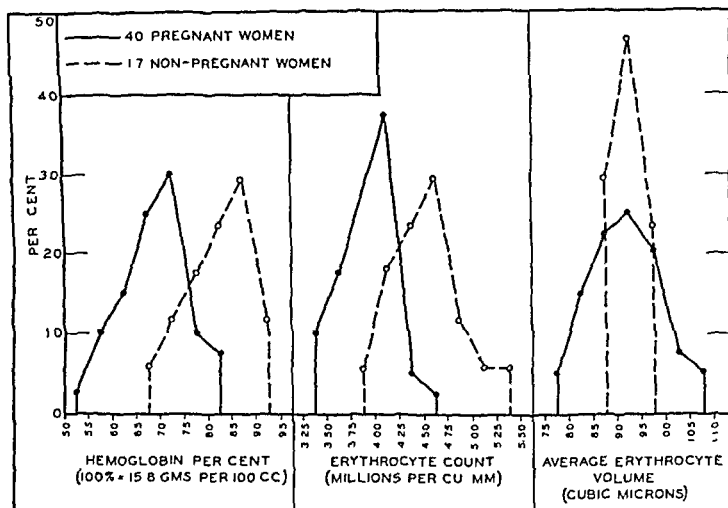


Fig. 3 Comparison of the distribution of the hemoglobin percentage number of erythrocytes and the average erythrocyte volume in pregnant and in non pregnant young women

taneously. For therapeutic effect the type of medicinal iron is less important than the quantity given. Relatively large doses are required, the amount depending, in part, upon the preparation employed. The ferrous compounds are most readily utilized, particularly in the presence of achlorhydria but they probably possess no advantages over other inorganic preparations when the latter are administered in sufficient dosage.

The weekly gains in hemoglobin during administration of iron to 28 patients with achlorhydria, to 14 with normal gastric secretion the anemia in this group being due to hemorrhage, and to 12 pregnant young women are shown on Figure 2. The preparations employed were either reduced iron 15 grams daily, or ferric ammonium citrate, 6 grams daily. The average daily increases of hemoglobin for the first two groups were respectively 97 per cent (153 mgm) and 103 per cent (163 mgm), gains equal or superior to those reported following the use of iron in conjunction with copper, desiccated stomach, or parenteral administration of liver extract. The pregnancy group requires special mention.

It has long been recognized that pregnancy is ordinarily accompanied by a lowering of the hemoglobin and erythrocyte values, an observation which gave rise to the term "physiologic anemia of pregnancy." Recently Strauss⁴ has rejected the conception of a physiologic anemia, attributing all such instances to simple hydremia, since it is known that the volume of the blood is increased during the last trimester by approximately 20 per cent. True anemia in pregnancy Strauss classifies as either hypochromic, due to iron deficiency, or of the type of pernicious anemia,—a macrocytic anemia responding specifically to liver. With the latter we are not here concerned. However, in so far as hydremia is constant over a considerable period of time anemia may be said to exist, since the efficiency of the blood as a carrier of oxygen is reduced in direct relation to the amount of additional water which it may contain. Usually, although by no means invariably, the pregnant woman fails to compensate by an increased output of erythrocytes for the dilution of her blood. The resulting anemia may be attributed only in part to a deficiency of iron conditioned by the

demands of the fetus, by the reduction in gastric acidity, and possibly by a diet poor in iron. It is also, as evidenced by the normal color index and normal cell volume, the effect of a lack of stimulus to increased blood formation. Such absence of stimulus is probably the result of a gradually developing anemia of only moderate severity to which the body adapts itself, possibly in association with a decrease in physical activity. The distribution of erythrocyte counts, hemoglobin percentages, and mean corpuscular volumes of 40 pregnant young women are compared in Figure 3 with the same determination made upon 17 healthy non-pregnant women of the same age group.

It should be observed that in the pregnant group there is an approximately equivalent reduction of hemoglobin and number of red blood cells giving a color index of one, except in the few more severely anemic patients with hemoglobin values of 50 to 60 per cent and red blood cell counts of 3,250,000 to 3,500,000, in whom the color index is definitely lowered. Similarly the values for mean corpuscular volume of the pregnant women are either normal or slightly increased, except in the cases of more severe anemia where they are distinctly less than normal. If the anemia becomes sufficiently severe the requirements of the body will manifest themselves by an increased red blood cell production resulting in a lowered color index and mean corpuscular volume. Thus no true distinction exists between the anemia of hydremia and the hypochromic anemia of pregnancy. They are but different de-

grees of the same basic condition; that is, of a deficiency of iron.

Evidence in support of this hypothesis is obtained from the observations of the blood of pregnant women during treatment with iron in comparison with those made on untreated cases of pregnancy. (See Fig. 4.) The beneficial effect of iron in these cases appears to be due to a double effect. Not only does it supply a possible deficiency, but it also apparently acts as a direct stimulant to erythropoietic activity, in a manner analogous to that shown by Josephs⁵ to occur in the early anemia of prematurity before depletion of the iron stores has had time to develop.

Those cases of iron deficiency anemia in which the blood count fails to reach a normal value after iron therapy alone present a manifold problem. In the majority of instances either continued excessive loss of blood, or the presence of an active infection explains the failure of response to treatment. In some cases improvement will follow the institution of a diet high in animal protein, while others benefit from the administration of concentrated bile pigment.⁶ A group of patients whose anemia is of long standing maintain a stationary subnormal level of the blood, apparently from failure of the bone marrow to respond beyond a limited extent. Supplementary drug therapy is usually of no avail since iron itself, in these cases, is the most powerful medicinal stimulant to blood formation. In our experience the use of copper, liver extract, and desiccated stomach, as supplements to iron, has been of no advantage.⁷ In addition to a diet rich in proteins and vitamins whole cooked liver may be recommended in the treatment of these cases of sluggish response, since it possesses virtues not contained within its various extracts.⁸

The anemias caused by retarded maturation of the erythrocyte, characterized by hyperchromia and macrocytosis, have within a few years risen from complete obscurity to a considerable measure of enlightenment and their treatment to an unusual degree of precision.

Pernicious anemia is a protean disease frequently requiring for its adequate management the combined efforts of internist, neurologist, urologist, physiotherapist, and dietitian. Here the consideration of its

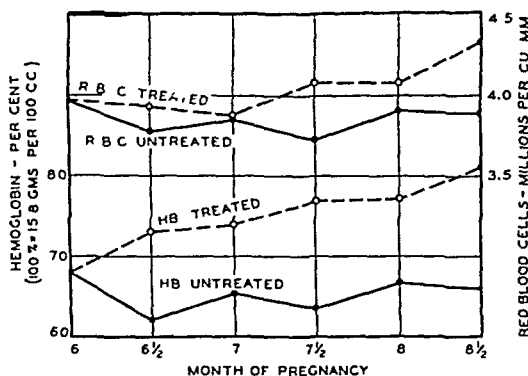


Fig. 4. The effect of iron upon the blood in normal pregnancy. Observations on 12 patients receiving reduced iron and on 40 patients receiving no treatment.

treatment will be limited to those measures directed toward restoring the blood to normal. In pernicious anemia the lack of a substance in the gastric secretion shown by Castle¹ to be essential for the development of the red blood cell is relative rather than absolute. Its content varies in different patients, and in the same patient at different periods of his disease. Goldhamer and Isaacs,¹⁰ at the Simpson Memorial Institute, have demonstrated that beginning remission may be induced by the oral administration of gastric juice obtained from patients with pernicious anemia, after its incubation with ground beef muscle, or by its intramuscular injection in concentrated form without previous incubation. Approaching the problem from another direction it has been shown by several investigators, including the present author, that, in certain cases of pernicious anemia, remission may be induced by supplying an abundance of the extrinsic factor.¹¹⁻¹²

The methods of assaying preparations devised for the treatment of pernicious anemia are of three sorts. The reticulocyte response signifies the release into the circulation of immature red blood cells occasioned by a sudden stimulus to erythropoiesis. As a measure of the effect of the therapy employed it has certain definite limitations, particularly when applied to the testing of preparations administered by injection. These limitations arise from the restricted capacity of the bone marrow to respond to a sudden stimulus. Thus a maximum reticulocyte percentage observed after the injection of an extract suitably prepared from 50 grams of liver does not indicate that a greater response will be secured following the injection of twice the amount of the same extract. The excess of active material contained in the latter quantity exerts its activity more slowly and over a longer period of time. The determination of the rate of increase of the red blood cells, and particularly of the time required for a level of at least 4,000,000 to be reached is most valuable in estimating the effects of treatment. The figure 4,000,000 is selected not as representing the desired goal of therapy, but because further increase is dependent less upon the available quantity of "maturing principle" than upon other

factors, such as the presence of adequate material for hemoglobin formation, and the physiologic level of the individual patient. Finally the dosage of anti-anemic substance required for maintenance of the blood count within normal limits may be regarded as a measure of the activity of the preparation employed. Of the three methods of assay this is the least valuable, since, as has been pointed out, the requirements of patients vary so widely, and the individual may at any time develop a spontaneous remission occasioned by temporary increases in the secretion of intrinsic factor. This objection is practically inapplicable to the two former methods of assay since the pronounced effect of large doses of potent material in causing remission renders the individual's inherent efforts of almost no significance.

At the present time it is generally recognized that the treatment of pernicious anemia by parenteral administration of liver extract offers definite advantages which may briefly be summarized as: (1) Rapid hematologic response, (2) certain absorption, (3) closer supervision of the patient, (4) interval rather than daily treatment, (5) regularity and uniformity of dosage, and (6) greater insurance against progress of the central nervous system lesions by maintenance of a high blood count.

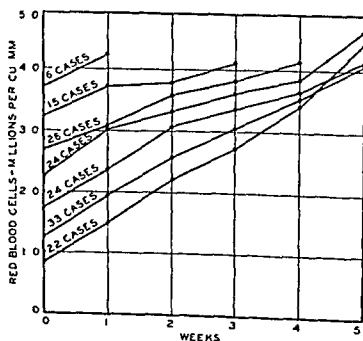


Fig 5 The rate of increase of the erythrocyte concentration of 150 cases of pernicious anemia treated with liver extract by injection. The cases are grouped according to the level of the count before treatment.

Bearing in mind the criteria of potency outlined above, the results which may be expected from the intramuscular or intravenous injection of liver extract are summarized on the accompanying charts. (See Figs. 5 and 6.) The average peak of the reticulocyte response as well as the time required to attain a red blood cell count of 4,000,000 are shown for 150 cases of pernicious anemia in relapse grouped according to the level of the blood count before therapy, who have been treated at the Simpson Memorial Institute during the past four years. The patients received weekly, by injection, the extract of 50 to 100 grams of fresh liver. This extract, prepared at the Institute, represents 5 grams of liver in one cubic centimeter, so that from 10 to 20 c.c. were given weekly. Since the dilute extract from 50 grams of liver, administered parenterally, will, in uncomplicated cases of pernicious anemia, provoke a maximum reticulocyte response, extracts in smaller bulk which are derived from 100 grams of liver should produce a similar effect if a reasonable amount of the activity of the liver has been retained. In

our experience, as well as that of others,¹³ such extracts at present commercially available, uniformly fail to cause the expected response, indicating, that as compared to the more dilute preparations at least 50 per cent and probably 75 per cent of their potency has been lost during the process of concentration.

Recognizing the advantages to be gained from a highly potent product suitable for intramuscular injection, we have for some time devoted efforts to the preparation of a concentrated extract of liver more truly representative of the quantity of material from which it is derived. Recently a method of extraction and concentration has been devised by Kyer which seems to fulfill the desired qualifications. An account of this process is in press.¹⁴ The patient whose response is depicted in Figure 7 is one of several who have received this extract with gratifying results. After a single intramuscular injection of 3 c.c. derived from 100 grams of liver a reticulocyte peak of 53 per cent was attained. With weekly injections of 3 c.c. the subsequent rate of increase of the red blood cells was slightly

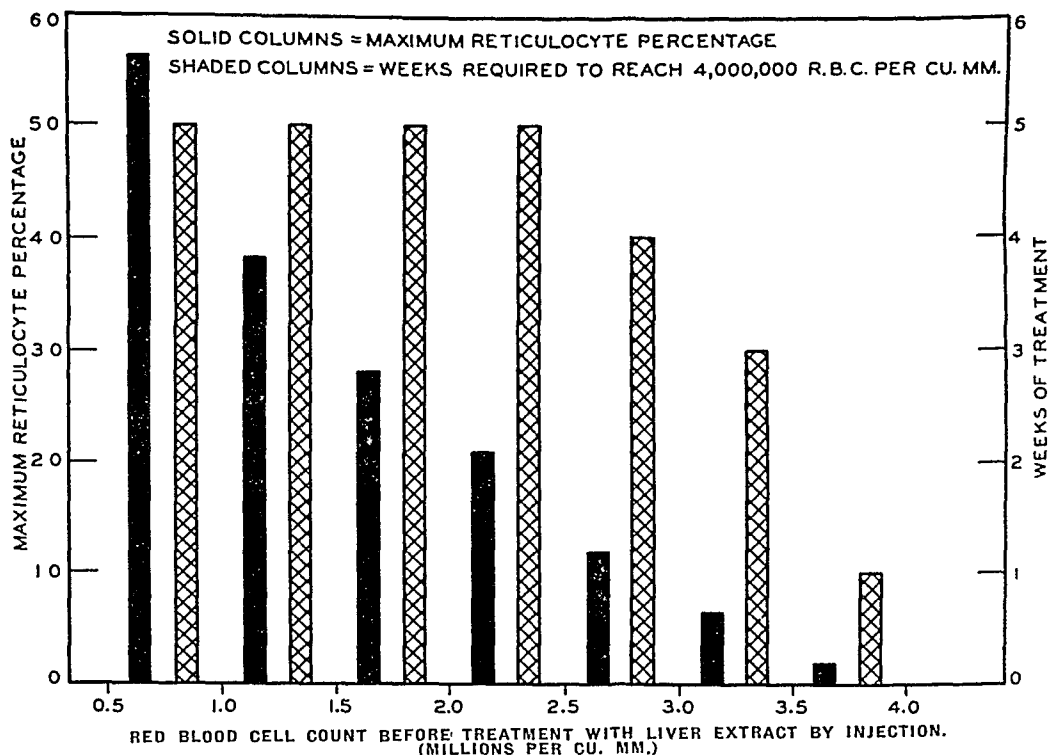


Fig. 6. Comparison of the maximum reticulocyte percentage and the weeks required to reach 4,000,000 red blood cells per cubic millimeter in patients with pernicious anemia treated by parenteral liver extract.

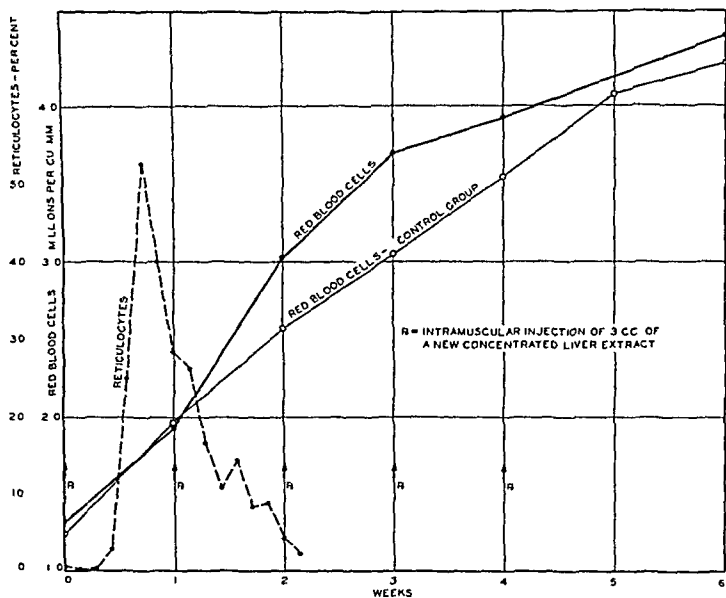


Fig 7 Effect of the intramuscular administration of a new liver extract of exceptional potency to a person with pernicious anemia. Comparison of the weekly gain in blood cells of this patient and the average gain of 33 cases having the same count before treatment.

superior to the average of 33 patients, possessing the same blood count before treatment, who received the more dilute extract in greater quantities.

Conclusions

(1) The study, in conjunction of the number, size, and hemoglobin content of the red blood cells yields an insight into the nature of anemias caused by deficiencies, and provides a rational basis for their treatment.

(2) Retarded rate of hemoglobin formation is most often due to a lack of iron, although such deficiency may possibly be associated with insufficient available protein pigment complex, and certain vitamins.

(3) Evidence is presented that in

pregnancy the anemia caused by dilution of the blood persists because of absence of stimulus to increased blood formation together with a relative lack of iron. In large part, it may be corrected by the long continued use of this metal. It is suggested that medicinal iron be given routinely throughout the latter half of pregnancy.

(4) Retarded maturation of the erythrocyte is commonly the result of a relative deficiency of either the intrinsic or extrinsic factors of Castle. In pernicious anemia restoration of the blood to normal is most effectually accomplished by the parenteral administration of liver extract. The results obtained from the use of a new extract of exceptional potency are described.

References

1. Wintrobe M. M. Anemia Classification and Treatment on Basis of Differences in Average Volume and Hemoglobin Content of Red Corpuscles. *Arch Int Med* 54:256 1934.
2. Haden R. L. Clinical Significance of

- Volume and Hemoglobin Content of the Red Blood Cell. *Arch Int Med* 49:1032 1932.
3. Davidson L. S. P. and Leitch I. The Nutritional Anemias of Man and Animals. *Nutr Abs and Rev* 3:901, 1934.

4. Strauss, M. B.: The Etiology and Treatment of Anemia in Pregnancy, *J. A. M. A.* 102:281, 1934.
5. Josephs, H. W.: Anemia of Prematurity, *Am. J. Dis. Child.* 48:1237, 1934.
6. Patek, A. J., Jr., and Minot, G. R.: Bile Pigment and Hemoglobin Regeneration: Effect of Bile Pigment in Cases of Chronic Hypochromic Anemia, *Am. J. M. Sc.* 188:206, 1934.
7. Bethell, F. H., Goldhamer, S. M., Isaacs, R., and Sturgis, C. C.: The Diagnosis and Treatment of the Iron-Deficiency Anemias, *J. A. M. A.* 103:797, 1934.
8. Keefer, C. S., and Yang, C.: The Treatment of Secondary Anemia: A Study of the Results in 126 Cases, *Arch. Int. Med.* 48:537, 1931.
9. Castle, W. B.: Observations on the Etiological Relationship of Achylia Gastrica to Pernicious Anemia. I. The Effect of the Administration to Patients with Pernicious Anemia of the Contents of the Normal Human Stomach Recovered after the Ingestion of Beef Muscle, *Am. J. M. Sc.* 178:748, 1929.
10. Goldhamer, S. M., and Isaacs, R.: Rôle of Decreased Amount of Gastric Secretion in Production of Pernicious Anemia, *Proc. Soc. Exper. Biol. and Med.* 31:706, 1934.
11. Ungley, C. C., and James, G. V.: Effect of Yeast and Wheat Embryo in Anemias: Nature of Hematopoietic Factor in Yeast Effective in Pernicious Anemia, *Quart. J. Med.* 3:523, 1934.
12. Russell, H. K.: Hematological Response of Addisonian Pernicious Anemia to Brewer's Yeast, *Ann. Int. Med.* 7:1398, 1934.
13. Dameshek, W., and Castle, W. B.: Assay of Commercial Extracts of Liver for Parenteral Use in Pernicious Anemia, *J. A. M. A.* 103:802, 1934.
14. Kyer, J. L.: A Method for the Preparation of a Concentrated Liver Extract, *Proc. Soc. Exper. Biol. and Med.* (in press).

Discussion

DR. ELLERY G. ALLEN, *Syracuse*—It is now of only historical interest that anemias were once divided into two groups, "Primary and Secondary." Methods of diagnosis were then inadequate and the results of treatment were disappointing. The tremendous stimulus given medical research by the work of Whipple, Minot, and Murphy, has resulted in a clearer understanding of the etiology and treatment of anemia.

Every case of anemia, irrespective of the obvious presence of other disease entities, should be subjected to thorough hematological survey, since we know that pernicious anemia, for example, may be present in the advanced arteriosclerotic in the case with syphilis, myxedema, and gastric neoplasm. Detailed studies of the erythrocytes size and their hemoglobin concentration give valuable information as to etiology of an anemia and suggests the appropriate treatment.

I should like to add an optimistic note concerning the treatment of pernicious anemia. For more than two years the cases of pernicious anemia at the University

Hospital and Syracuse Free Dispensary have been treated with concentrated liver extract intramuscularly. The usual weekly dosage in relapse and in those patients with neurological symptoms has been 3 c.c. (derived from 100 grams of liver). Of the patients we have treated in this manner no case has failed to have a remission, no patients have developed neurological lesions under treatment and all cases already exhibiting neurological symptoms, irrespective of their severity, have improved at least subjectively. It appears that liver extract is the most necessary factor and that physiotherapeutic measures, intended to affect muscular relaxation and re-education, are helpful adjuncts. Our dispensary patients, most of them on the welfare rolls, received the minimum in dietary allowances, and it would seem that special diets so often advised in addition to liver therapy, are not required.

It has been a great privilege to have read Dr. Bethell's paper and to have been asked to contribute in a small way to this program.

AMERICAN BIRTH RATE INCREASES

In 1934—for the first time in 10 years—there was an increase in the American birth rate. It had dropped, in 10 years, approximately 26 per cent, or, on the average, 2.6 per cent per year; between 1933 and 1934 it rose 3 per cent.

The 1934 rise followed an increase, the year before, in the country's marriage rate, which, like the birth rate, had been persistently declining. It is the belief of the editor of the *Statistical Bulletin* of the Metropoli-

tan Life Insurance Company that the reversal of the trend for both marriages and births is the direct result of an upward turn in the economic tide. Better times have made it possible for thousands of young men and women to consummate marriages which the depression had forced them to postpone. And thousands of married couples have been enabled, through better times, to fulfill a fundamental obligation to society and themselves, namely, to bear and rear children.

FRACTURE OF THE (NAVICULAR) CARPAL SCAPHOID

E K CRAVENFR, M D , F A C S , *Schenectady*

Fractures of the (navicular) carpal scaphoid are not uncommon. The exact frequency of these will always be unknown, since every man's experience varies. Some authorities state that thirty-eight per cent of hand fractures will be through the carpal scaphoid.⁹ Other authorities cite the relative frequency, but do not give exact figures.

Fractures of the carpal scaphoid take place either through its tuberosity or through its waist. Those through the waist are particularly important, while those through the tuberosity are only worthy of mention.^{5, 7} I will not describe the pure mechanics of this fracture, since

thrombalgia and Raynaud's syndrome have been reported as sequelae of this disorder.¹⁰ Brown¹ advises this test: the fist is clenched and the second distal metacarpal head is tapped firmly with a small hammer. Accentuation of wrist pain indicates fracture of the scaphoid. This author rather doubts the efficacy of any physical test. The physical examination may provoke a suspicion, but the final diagnosis is made by the x-ray.

Given a patient with a sore wrist, an x-ray must be taken. If this is taken early in the ordinary position (with the hand prone upon the cassette), the fracture may be missed.^{2, 5, 11, 14} It is often

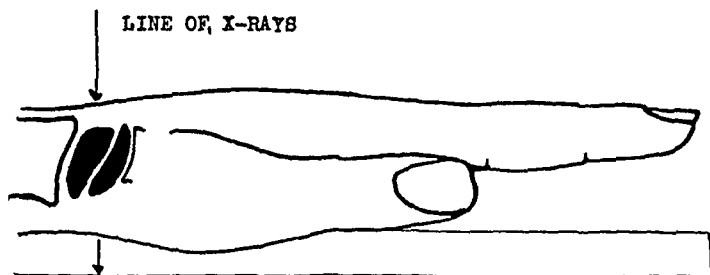


Fig 1 (After Schnek) Showing mechanism of wrist with hand in neutral position. In this position the scaphoid is flexed so that fracture lines overlay each other and may be missed in the x-ray.

we are interested in the fracture, not in minutiae. Trauma is essential and the appropriate association of incidents, such as an out-stretched hand, must be present.

Non union is very prone to occur in fractures through the waist. Stimson,⁸ thirty five years ago stated, "Fractures of the carpal scaphoid are usually attended by complete disability of the wrist." All other authorities agree that these disabilities are difficult to cure.^{1, 3, 4, 5, 7}

The patient with the fractured scaphoid usually complains of wrist pain and inability to dorsiflex the wrist. Often there is pain over the anatomic snuff box.^{1, 9} This pain is usually accentuated by pressure. Often there is weakness of the hand and inability to grasp firmly. Ery-

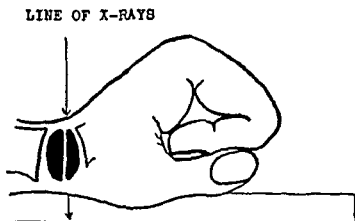


Fig 2 Showing position of scaphoid with fist clenched. In this position the usual waist fracture of the scaphoid lies in the same plane as the Roentgen rays. By using this position, a greater chance for fracture line demonstration is possible.

necessary to reray suspicious wrists after ten days (after absorption has begun).⁵ (Schnek¹¹ has the patient clench the fist and draw it into slight ulnar deviation, by this means bringing the fracture line in the plane of the x-rays.) By the ulnar deviation, the fragments are distracted. Care must be taken to avoid mistaking a bipartite scaphoid for fracture. Fortunately these are rare, usually bilateral, and do not show the rough ragged edge of recent fracture or the atrophy of old fracture. Even after these precautions, the fracture line may not show and the plates must be repeated. In summary, the diagnosis is almost entirely based on the x-ray. Certain clinical signs point toward carpal injuries, but they are not of sufficient clarity to preclude all other disorders.

There are several theories for non-union in fractured scaphoids. A common one is predicated upon the blood supply of the scaphoid. It was formerly believed that there was but one nutrient artery. Lützeler,⁷ by injection of the radial artery, shows that both proximal and distal parts have independent blood supplies. Even after waist fractures, he shows that both ends have an adequate supply of blood. A second theory, advanced by Adams,³ is that the dorsal ligament is interposed between the bone ends. This is not believed by Burnett,⁴ but should be remembered as a possible cause. A fascinating theory is presented which lays the cause of non-union to the deterrent effects of joint fluid in this intra-articular fracture. Another cause is the paucity of periosteum and subsequent failure of subperiosteal bone development.¹⁶ Throughout the whole literature and in actual practice, free motion of the fragments seems most important. These are the theories. They all boil down to lack of adequate fixation and some possible extrinsic factors.

In waist fractures of the carpal scaphoid, the results are not good. It would be idle to state that no union took place in all untreated carpal scaphoids. We have not seen them all. However, a great many patients, the exact number dependent upon the observer's type of practice, return a few weeks after a so-called sprained wrist with persistent pain. Many authors state that healing is inversely

proportional to the time between the fracture and adequate treatment. This last statement applies, of course, only to the external method of treatment. This fact, probably a reiteration, is given to further impress the necessity of adequate treatment in this most disabling disorder.

Treatment in a large percentage of carpal scaphoids is imperative. The old writers agree^{7, 10, 14} that fixation in radial deviation and slight flexion should be persisted in from six to eight weeks. Boehler¹⁰ advises fixation for as long as eight months. From this, a small percentage will show bony union. A much larger percentage may show a painless fibrous union. A second group of authorities advise a removal of part or all of the fractured bone.^{2, 8} These writers admit, however, that while pain may be absent there is usually definite loss of wrist motion. The last and newer school recommends fixation of the two fragments by a bone peg or a bone graft across the fracture line. Schnek¹³ curetted the fracture line. Murray⁶ does not feel this necessary. All the authorities get perfect or excellent results. Burnett¹⁷ raises the question as to whether some of these unions are not fibrous. This is beside the point, since all operated cases reported show perfect motion with painless wrists. Clinically, they are cured.

The operation of bone pegging is done in this manner:

A two inch incision is made over the radial side of the dorsum of the wrist in the long axis of the hand. The finger and thumb extensors are retracted and the capsule is demonstrated. This is cut transversely and the joint opened. A small nick is made in the scaphoid at the insertion of the dorsal ligament. Using this as a step, a drill is passed through both fragments of the scaphoid. (The author recommends an x-ray at this point to exactly localize the drill.) If the position is found to be correct, the drill is then removed and a small osteoperiosteal graft is passed up into the drill hole. The capsule and skin are closed in layers and the wrist put up in forty-five degrees dorsiflexion and moderate radial deviation. The plaster remains in place six to eight weeks, dependent upon the x-ray evidence of union.

Summary

That this fracture is disabling there is no doubt. Again there is no doubt that

most of our treatments are inadequate. Certainly, fixation of the wrist for long periods, cures only a certain percentage of cases and causes loss of valuable time. Removal of the fragments, either completely or in part, can not be advocated since all authorities agree that this leaves an undesirable residual. I offer, in substitution, the very simple operation of bone pegging which so far has given perfect functional results. This operation is modified by one man who merely drills through the fragments. Probably, the end results are the same because sufficient change in physiology occurs to re-establish a nearly normal relationship. There-

fore, it seems to us a waste of the patient's time to treat waist fractures of the scaphoid other than by the bone pegging operation. By this, we are assured a good result and we have not delayed the cure. By any other method the results may be good, but there is a wide margin of doubt.

Conclusion

A simple reliable method for the cure of fractured scaphoids is herein extolled. This author recommends that it be applied to all waist fractures, new or old, since by this we remove the element of probability of cure.

References

- 1 Brown, K. Patterson. Fractures of the Navicular, *British Med Jour* 3509, 1928.
- 2 Torpy, C. D. A Case of Fracture Dislocation of the Carpal Scaphoid, *Indian Med Gaz* 65 18, 1930.
- 3 Adams, J. D., and Leonard, Ralph. Fracture of the Carpal Scaphoid, *New England Jour of Med* 198 401, 1928.
- 4 Burnett, Jos. H. Fracture of the Carpal Scaphoid, *New England Jour of Med* 200 126 1929.
- 5 Murray, Gordon. Bone Graft for Non-Union of the Carpal Scaphoid, *British Jour of Surg* 22 63, 1934.
- 6 Murray, Gordon. Bone Graft for Non-Union of the Carpal Scaphoid, *Surg Gyn and Obst* 60 540, 1935.
- 7 Lutzeler, H. Die Entstehungsursache der Pseudarthrose nach Bruch des Kahnbeins der Hand. *Deutsche Zeitschrift für Chirurgie* March 9, 1932.
- 8 Grace, Roderick V. Fracture of Carpal Scaphoid, *Ann of Surg* 89 752, 1929.
- 9 Thomson, I. E. Fractures of the Carpal Navicular and Triquetrum Bones, *Amer Jour of Surg* 21 214, 1933.
- 10 Boehler, Lorenz. The Treatment of Fractures, Pub Wm Meredith, Vienna 1929.
- 11 Schneck, Fritz. Zur Röntgenologischen Diagnose von Kahnbeinbrüchen der Hand, *Zentralblatt für Chirurgie* 32 1954, 1933.
- 12 Berlin, David. Position in Treatment of Fractures of Carpal Scaphoid, *New England Jour of Med* 201 574, 1929.
- 13 Schneck, Fritz. Die Behandlung der verzögerten Callusbildung des Os Naviculare Manus mit der Beckschen Bohrung, *Zentralblatt für Chirurgie*, 4 2600 1930.
- 14 Snodgrass, I. E. End Results of Carpal Scaphoid Fractures, *Ann of Surg* 97 209, 1933.
- 15 Flandin, C., Poumeau-Dehille, and Van Bogaert, A. Un Cas Causalgique avec Syndrome de Raynaud et Erythromelalgie Post-Traumatique. *Bulletin et Memoires Society Medicale des Hôpitaux de Paris* 3 1293, 1931.
- 16 Johnson, R. W. (Quoted by Murray), *Jour of Bone and Joint Surg* July 1927.
- 17 Burnett, Jos. H. Fracture of the (Navicular) Carpal Scaphoid, *Surg Gyn and Obs* 60 529, 1935.

CASE REPORT

WOOD SPLINTER IN RIGHT ORBITAL CAVITY

J. L. SENGSTACK, M.D., Huntington

In covering the emergency work of a comparatively small community hospital, bizarre and unusual accidents are becoming more frequent. However, the following description of a recent case is so unusual, both in the character of the accident and in the end result, that I feel it is worth reporting.

The patient, Mr. T. K., age 19 years, single, white, was brought into Huntington Hospital in the ambulance following an accident in which he was thrown from an automobile when it ran off the road into a wooden fence. His head struck a wooden

post and a large fragment of wood was driven into the inner aspect of the right orbital cavity and broken off so that a portion $1\frac{1}{2}$ " long, 1" thick and $\frac{3}{4}$ " wide was visible externally. The skin of the forehead and the right superior tarsus and over the bridge of the nose, sustained a stellate laceration. The right eyeball was pushed outwards and downwards and was not visible. A large lump was seen and felt under the angle of the jaw on the left side. The left eye appeared normal and pupillary reaction was normal. The ears showed no bleeding or other abnormalities.

There was extensive hemorrhage from the nose and both nares were obstructed. Considerable hemorrhage was apparent from the posterior pharyngeal wall. The rest of his physical examination was negative. At no time did the patient lose consciousness. The accident happened about 2:00 A.M., December 3, 1934, and as the x-ray department was not available it was deemed advisable to remove it at once. Consultation with an ophthalmologist showed the eyeball edematous and displaced, but probably not punctured. The patient had received morphine, grs. $\frac{1}{4}$, about 2:30 A.M., and he was given another injection of morphine, grs. $\frac{1}{4}$ at 3.15 A.M., before he was taken to the operating room.

of dark blood. About one half-hour later he again vomited similar material and then went to sleep.

Attention was then given to the fragment which measured approximately $6\frac{1}{2}$ " in length, 1" wide and $\frac{3}{4}$ " thick, irregularly tapering and a blunt point which had passed through the inner table of the orbit and right nasal bone, opening the right frontal sinus, pierced the posterior portion of the nasal septum, injuring the vomer, left ethmoid, and a portion of the left pterygoid process of the sphenoid bone, to lodge against the left angle of the mandible.

X-ray examination later that day showed a markedly comminuted fracture of the mesial wall of the right orbit and extending



Showing point of entrance of the large wood splinter, its comparative size (approximately $6\frac{1}{2} \times 1 \times 1\frac{1}{2}$ inches), and its position with $1\frac{1}{2}$ inches protruding from wound

Procedure

The entire area was painted with tincture of merthiolate. Under a light chloroform anesthesia, the end of the fragment was grasped with two large Kocher clamps and after a few minutes of steady traction, the fragment was removed. The lacerations were approximated with dermal sutures. There was no excessive hemorrhage. The right nasal cavity communicated with the external opening; the left did not. One or two small spicules of fractured bone were removed. The cavity was lightly packed with iodoform gauze. The right eyeball assumed its normal position and was uninjured, except for edema and hematoma of the conjunctiva. A moist dressing was placed over the wound and held in place by a circular bandage. As he reacted from anesthesia, he vomited a fairly large quantity

into the floor of the right frontal sinus and superior ethmoids. No fracture of the cranial vault could be found.

After twenty-four hours, the iodoform gauze drain was removed and two small rubber tissue drains were placed into the wound. The right eye was irrigated with warm boric acid solution and metaphedrin dropped into both nares t.i.d. The third day all drainage was removed and after this the patient made a completely uneventful recovery and was discharged from the hospital on the ninth day.

Comment

The surprising feature of this case was the fact that such a large foreign body could traverse so many structures without seriously injuring any of them.

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Symposium on Poliomyelitis

SYMPTOMATOLOGY AND TREATMENT OF ACUTE POLIOMYELITIS

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It was believed until recently that the early symptoms of poliomyelitis were due to a generalized infection by the virus. The recent work of Brodie showing that the virus travels from the nasopharynx through the olfactory nerve to the central nervous system and that therefore there is not a generalized infection, makes it necessary for us to change this conception. Perhaps this change is not so radical as it would first appear. Is it not probable that the headache, fever, gastrointestinal disturbance, and other symptoms of typhoid fever, for example, that we usually consider to indicate a generalized infection are really due to the action on various parts of the central nervous system by the toxins of the disease process?

It is not necessary in this discussion to go into the exact localization of centers in the central nervous system that would give rise to the various clinical manifestations. No doubt it would be impossible to do so with any degree of accuracy as regards the origin of many of the symptoms. In a general way, the centers are located in the medulla and midbrain. It is necessary for us, however, to change quite radically our ideas in regard to the pathogenesis of poliomyelitis.

It had been believed that the early symptoms indicated a generalized infection. In some cases it was thought the infection was checked before it reached the central nervous system and under these conditions there was the true abortive type of poliomyelitis. We also believed that if the infection went on and invaded the central nervous system there developed signs of meningeal irritation, that is the nonparalytic type of poliomyelitis. Then if the virus localized in the anterior horn cells of the spinal cord there developed the lower motor neuron

type of poliomyelitis—the old classical form of the disease—or if it localized more in the encephalon, the rare encephalitic type of poliomyelitis, or if the localization took place in the cerebellum, Clarke's columns, or the intervertebral ganglia, the ataxic type which is also rare. We must now think of the disease as essentially involving the central nervous system from the beginning. The description of the symptoms and types, however, remains unchanged.

From our somewhat limited knowledge, it is probable that the incubation period is rarely less than 6 or more than 18 days. Usually, it is from 7 to 14 days.

The initial symptoms are much the same in all types of the disease and they may be quite as severe in the nonparalytic as in the paralytic forms. While the onset may, rarely, be insidious, in the vast majority of cases it is very abrupt. Three types of onset may be described. In a somewhat small number of cases, paralysis develops without premonitory symptoms. In another rather small group of cases, there is a period of remission in the development of the disease. In by far the largest group, the symptoms progress rapidly and uninterruptedly. The early symptoms are headache, fever, vomiting, constipation or diarrhea, and not infrequently congestion of the throat and pharynx. The temperature may be as high as 104° or 105°. More often it is from 100 to 103° F. It has no characteristic curve. It usually lasts from 4 or 5 to 10 days or longer and falls by lysis more often than by crisis.

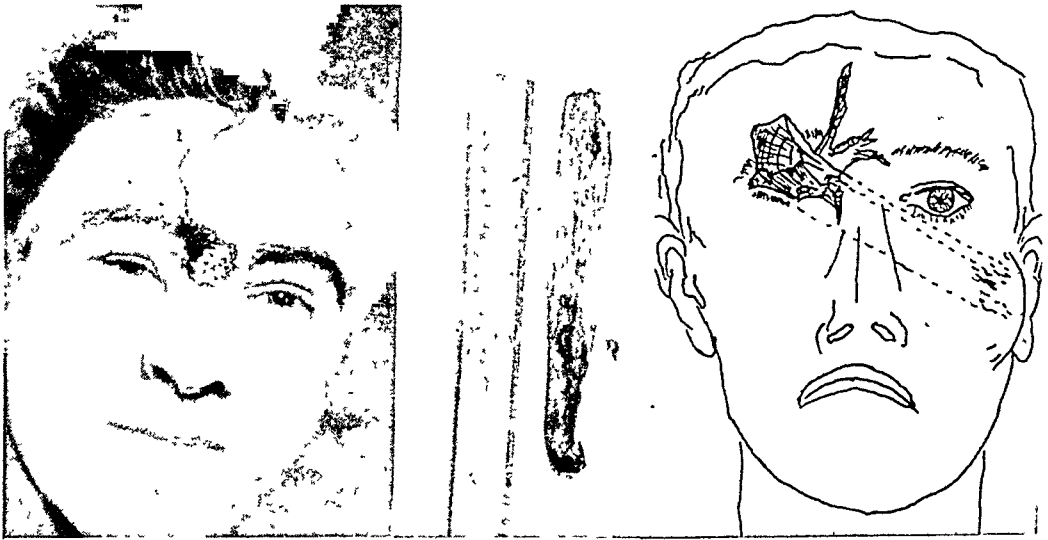
Occasionally a secondary elevation of temperature occurs, often but not always accompanied by an extension of the paralysis. The pulse rate is usually in proportion to the fever. A much more rapid

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both legs are most frequently involved but any group or any combinations of groups may be affected. The degree of involvement varies from weakness to complete loss of power. Death in poliomyelitis is practically always due to respiratory failure associated with increasing paralysis of the muscles of respiration. It would seem that at times death may be due to involvement of the vital centers without the skeletal muscles being involved. We saw in the epidemic of 1916 a few instances of this type.

During the latter part of the epidemic of poliomyelitis in New York City in 1931, Dr. Emanuel Appelbaum saw a group of 5 cases which presented a uniform and unusual picture. After the usual symptoms of onset, apathy developed, together with profound asthenia of the whole body, to such a degree that there was difficulty even in eating or speaking. At this stage there was no true paralysis except an internal strabismus in one patient. While the reflexes were present early, they were abolished as the disease progressed. The temperatures were only moderately elevated, 101° to 103° F. The pulse and respiration rates were generally rapid and there was definite cyanosis and a moderate degree of dyspnea. After the development of these symptoms—apathy, asthenia, cyanosis, and dyspnea—death ensued in from 24 to 48 hours, although 4 of these 5 patients were placed in respirators. This sudden death would seem to indicate an involvement of the vital centers, because patients suffering from paralysis of the muscles of respiration usually live for a longer time in a respirator.

Reference has already been made somewhat briefly to the different types of poliomyelitis. We have no time to describe these types in great detail. Indeed they are largely self explanatory. It does seem necessary to point out, however, that a differential diagnosis between the encephalitic or ataxic type of poliomyelitis and epidemic encephalitis can be made with no degree of assurance. Indeed, the picture that Strumpell gave of the encephalitic type of poliomyelitis clearly shows that he was describing cases that we would now diagnose as epidemic encephalitis. It may be also stated that it is often difficult or impossible to differ-

entiate the nonparalytic type of poliomyelitis from the meningeal type of encephalitis.

Very rarely, relapses and second attacks of poliomyelitis may occur. By relapses is meant an exacerbation of paralysis several weeks after the disease has apparently become quiescent. A few such instances are reported in the literature and in the epidemic of 1931, Dr. Lawrence Smith described several cases in which an extension of the paralysis occurred from 2 weeks to 2 months after the initial attack.

Second attacks of poliomyelitis are indeed rare. We have seen 2 such cases, one with an interval of 6 years, another with an interval of nearly 20 years between the two attacks. Nine cases were reported in the literature up to 1932 and a 12th case by Quigley in 1934.

A few words should be said in regard to the examination of the spinal fluid. In the majority of instances, the spinal fluid is increased in amount and shows an increased cell count ranging from slightly above normal to several hundred with a high preponderance of mononuclears. In some instances, the polymorphonuclears may predominate and this may occur at any stage of the disease. The protein is usually slightly to moderately increased. There is no correlation between increase in cells and the increase in protein. The sugar is normal or high. In rare instances, the spinal fluid findings may be within normal limits.

So much emphasis has been placed on the use of convalescent serum in the early stages of poliomyelitis that some discussion of this problem is still necessary. For many years it was claimed by the majority of workers in poliomyelitis that an attack of the disease might be aborted by the early administration intraspinally, intravenously, intramuscularly, or by a combination of these routes of convalescent serum. No controls were used in carrying out this treatment. Some of us consistently maintained that the apparently good results were due to the diagnosis of a larger number of nonparalytic cases but we were a small minority. In 1931 it was shown that when approximately 500 patients were treated in early stages by convalescent serum, and compared with approximately 500 other pa-

tients diagnosed in the early stages but receiving no serum, the results in the two groups were essentially the same both with respect to the development of paralysis and to case fatality. Any difference in the results was in favor of the untreated group. These results seem to most of us to be very conclusive clinical evidence that the convalescent serum had no therapeutic value. In addition to this, there are two experiments that indicate that from a purely scientific point of view the serum can have no value. One is the work done by Dr. S. D. Kramer.

Dr. Kramer inoculated a number of monkeys with the virus of poliomyelitis and sacrificed them on successive days, some of them before the animals showed any clinical symptoms of the disease. It was found that lesions appeared in the anterior horn cells of the cord sometime before clinical symptoms developed. This very early invasion of the cells makes it evident that convalescent serum cannot be used sufficiently early to be of any value since it would need to be used before the patient showed any evidence of illness.

The other point is that brought out by Dr. Brodie in his experiments showing the pathogenesis of the disease. If the virus travels up through the olfactory nerve and through the various tracts to different parts of the central nervous system, it is obviously impossible for serum given by any route to have a neutralizing effect. With this clinical and scientific evidence against any possible value of the convalescent serum, it seems that its use should be discontinued. Unnecessary therapy is always bad therapy. What then shall be done in the treatment of the early stages of poliomyelitis? Aside from the general symptomatic treatment of any acute infection, we have all observed that patients are much more comfortable after the increased intracranial pressure is relieved by lumbar puncture. Often a single lumbar puncture is sufficient. In other instances, it may need to be repeated several times.

Forced spinal drainage has been recommended by some physicians. I have had little personal experience with this method of treatment in poliomyelitis. At

present it is my impression that this method of treatment has no advantage over lumbar puncture. I realize however that more work will have to be done before this point can be definitely settled.

Any patient with acute poliomyelitis must have absolute rest. I can think of a number of instances in which patients may have been definitely harmed by being moved considerable distances. If signs of respiratory embarrassment develop, no time should be lost in placing the patient in a suitable respirator. If there is difficulty in swallowing, it may be necessary to feed the patient by gavage. In these cases, great care should be taken to keep the throat free from saliva by means of a suction apparatus. It has also been suggested that these patients be turned on the chest with the head lowered so that the secretions may drain from the mouth and nose. If weakness or paralysis of any muscle or groups of muscles develop, the affected parts must be supported in the proper position by pads, splints or casts as indicated. It is most important even in the early stages that the weakened muscles be protected from attempts at motion or from the tension of the opposing unparalyzed muscles. An experienced orthopedist should be consulted as soon as any paralysis develops.

While poliomyelitis is perhaps the disease most feared by parents, its seriousness is really over-estimated when one considers the following facts: First, there are undoubtedly a large number of cases of the truly abortive type which cannot be accurately diagnosed but which confer immunity. Secondly, there is a very large percentage (in the 1931 epidemic about 75 per cent) of the nonparalytic type which can be diagnosed with a high degree of accuracy. Thirdly, if proper orthopedic treatment is carried out, a large number of the patients who do develop paralysis, recover with little or no disability. Fourthly, there is no fear of later unfortunate developments in poliomyelitis as there is in encephalitis. Fifthly, there is now a vaccine against the disease which seems to offer high hopes in the way of prevention.

ACTIVE IMMUNIZATION AGAINST POLIOMYELITIS

MAURICI BLOOM MD AND WILLIAM H PARK MD, *New York City*

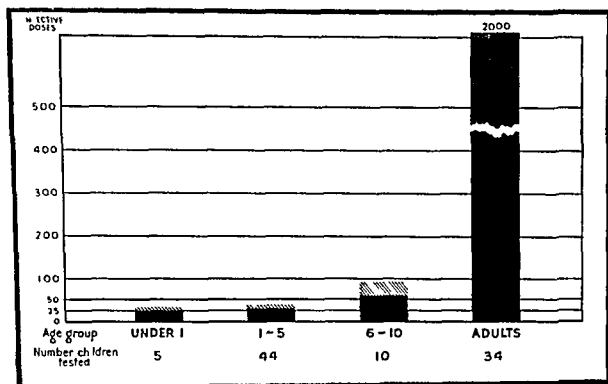
Since isolation of contact cases in poliomyelitis cannot be effective because of the probably high carrier rate and since serum therapy is of no benefit because the disease is confined solely to the central nervous system, a logical means of combatting this disease seems to lie in carrying out prophylactic measures on those of the susceptible age group, which usually includes those from one to five years, at which age level there is little or no antibody as indicated by Graph I, in which the relative amount of antibody in various age groups, viz, under 6 months, 1-5, 5-10, and 17 and over are represented.

There is a definite basis for the belief

by a study of the antibody content of the serums of humans and monkeys at different age levels. In monkeys there is no antibody at any age, probably because of a lack of contact with the virus. In humans, however, there is an increase in antibody with further maturing of the individual. Due to the fact that in the process of natural immunization some children contract the disease and succumb to it, an effective method of artificial immunization would be preferable.

In order that a vaccine be of use, it must be (1) Antigenic, (2) safe and innocuous, (3) practical (easy to standardize). To meet these requisites several

GRAPH I ANTIBODY CONTENT IN VARIOUS AGE GROUPS



that active immunization against poliomyelitis can be effective, for humans and monkeys recovered from an attack of the disease are immune. Moreover, the fact that only 12 second attacks in humans have been recorded suggests that there is only one strain of virus. Thus, an effective vaccine should protect against any poliomyelitis infection.

Epidemiological evidence points to the fact that immunity to poliomyelitis develops with ageing and is probably effected by exposure to the virus. Additional proof of this point is brought out

preparations were made up, in some of which either the chemical or physical nature of the virus was varied. In one method, sub-infective doses of active virus were injected into monkeys. This antigen proved dangerous in that it sometimes produced infection. Another preparation was a serum virus combination, which was discarded because it was impractical since many monkeys were required for its standardization. Germicidally inactivated virus was then tried. Of the various germicides used, formalin appeared to be the most effective. After many monkey

experiments, it was found that a mixture of 10 per cent virus suspension and 0.1 per cent formalin, incubated for 8-12 hours at 37° C. was the most efficacious of the formalized virus preparations tried, since with this treatment it was found that the virus was completely inactivated and so failed to infect and was also antigenic.

In addition, it did not produce irritation of the skin as did preparations which contained higher concentrations of formalin and had been incubated at lower temperatures. It was also found that a vaccine prepared with virus over-treated with formalin, as was the case when the incubation period was prolonged, was not so antigenic as a preparation that was just inactivated. In testing the vaccine in monkeys, the material was given intracutaneously in one or two doses of 2.5 c.c., 5 c.c., or 10 c.c. In the course of this

ously. To test for the presence of antibody, samples of blood taken from the children before vaccination and at varying intervals after, were tested. The serums were combined with several dilutions of poliomyelitis virus, incubated for 2 hours as 37°C., kept on ice overnight and then injected into monkeys intracerebrally. If the monkey developed a typical poliomyelitis, the serum did not have the supposed antibody content.

In the first group of 29 children immunized:

- 9 received one 5 cc. dose
- 10 received two 5 c.c. doses
- 5 received one 2.5 c.c. dose
- 5 received two 2.5 c.c. doses

The results are given in the accompanying table in which the dosage, number of doses and the number of children in each group responding with antibody at various intervals, are recorded.

TABLE

Period of testing	No. of children	Dose	No. of doses	No. showing antibody response	No. showing no antibody response
1 month after vaccination	9	5 c.c.	1	8	1
	10	5	2	10	0
	5	2.5	1	4	1
	5	2.5	2	5	0
5 months after	6	5	1	5	1
	10	5	2	10	0
	2	2.5	1	2	0
	4	2.5	2	2	2
8 months after	3	5	1	1	2
	6	5	2	6	0

work, it was observed that one 5 c.c. dose produced an immunity that was better than that following a mild attack of the disease, and compared favorably with the immunity produced by a severe attack of poliomyelitis or by immunization with active virus.

Work with the experimental animal pointed to the safety of formalized virus for it was not infectious for monkeys since large amounts of it did not produce the disease when injected intracerebrally. To doubly ascertain the safety of the material, before vaccinating children with this vaccine, six human adult volunteers were injected with it. None of these suffered any untoward reactions.

In the children the vaccine was administered in either one or two doses. One to 2 c.c. of each dose was given intracutaneously and the remainder subcutane-

In this small series it is quite evident that two doses give better results than one, inasmuch as a greater proportion showed antibody after two doses. With two doses more antibody was produced and the antibody was still present in all of those who received two doses each of 5 c.c. at both 5 and 8 months, whereas, with a single 5 c.c. dose there was a sloping off of antibody at this time.

The 5 c.c. amounts gave at least double the antibody response that 2.5 c.c. amounts gave and showed a greater tendency for the antibody to persist.

Of 26 children who received a single dose of vaccine 22 showed antibody response as did all 10 who were given 2 doses. Several children who failed to respond to a single dose, responded after a second dose, whereas those who had lost their antiviral substance after a single

inoculum, showed a rapid response after a second inoculation.

The children most likely more susceptible and in need of protection are those with no antibody, 7 out of 9 of such a group showed a response to the vaccine. Those with antibody present before vaccination responded better and in proportion to the degree of antibody. This is demonstrated in Graph II, in which is also given the relative responses to one and two inoculations of 25 and 5 cc amounts.

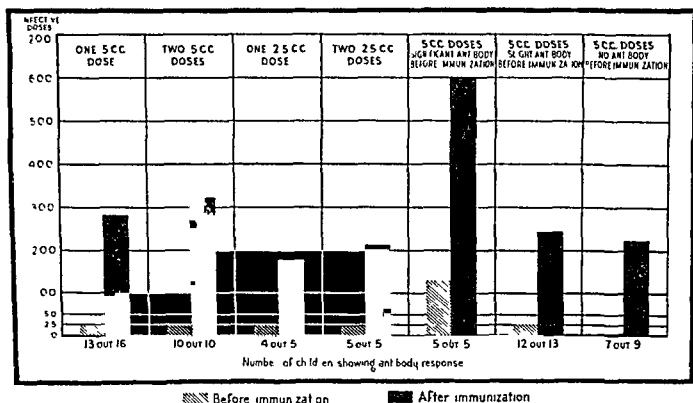
It was found that antibody response was usually present within 8 days, although occasionally it failed to develop until the second week. The height of the antibody level was reached between the third and fourth weeks.

Such a study was carried out in Kern County, Bakersfield, Calif., where more than 1,600 children were vaccinated, and in the accompanying table is given an outline of the more important facts relative to this study. However, the incidence of the disease in the non-immunized group and the number vaccinated was too small to give any conclusive information.

Other studies of a similar nature are being carried out both in New York City and Newark, N. J., where at different clinics large groups of children are being immunized, and followed over a considerable period of time and the incidence of the disease will be compared with that of control groups.

Such studies would be greatly facilitated if vaccine could be limited to those

GRAPH II COMPARATIVE RESULTS FROM 1 AND 2 DOSES, 2½ AND 5 CC AMOUNTS
Responses with various pre immunization antibody levels



Before immunization

After immunization

If the antibody developed proves sufficient to protect against natural exposure, the rapid rate of its development should render the vaccine useful in case of epidemics.

Although with two doses of vaccine it has been shown that in experimental animals and in children, antibody is produced and lasts at least 8 months, the actual test to determine whether or not the immunity is sufficient to protect against natural exposure rests with large scale controlled studies in epidemic areas.

children showing no antibody, because of the difficulties in obtaining sufficient vaccine. Thus an immunological test or neutralization test for antibody carried out in a small laboratory animal would be of great value. It was found possible to render mice susceptible to the disease by repeated daily x-ray exposure, for after they were given poliomyelitis virus intracerebrally, they showed cerebral manifestation. The virus was then transferred to normal, untreated mice for a number of passages. The incubation period in the

mice was 3 days and it was found possible with the use of mice to determine the antibody of serums.

IMMUNIZATIONS - KERN COUNTY, CALIFORNIA

Health Officer Dr Joe Smith
Chief Asst Health Officer Dr MA Gifford

1654 INDIVIDUALS VACCINATED · NOV. 1934 - MAY 1935

Number who had 1 dose	110
Number who had 2 doses	1573

Number in {Epidemic Endemic} focus	1184
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Known exposure	128
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REACTIONS

SYSTEMIC	3
LOCAL	

Necrosis	3
Induration	152
Very slight	460

NUMBER CASES NOV TO MAY 89

12% had more than 1 case per family
Population of epidemic focus 51,477

NONE OF THESE VACCINATED DEVELOPED
POLIOMYELITIS

That we were transferring the virus of poliomyelitis through mice was indicated

by the following facts: (1) The brains of mice produced in monkeys what appeared to be typical poliomyelitis with the usual histopathological findings. (2) Monkeys could be immunized against the monkey passage virus with the brains of these mice. (3) Various serums containing poliomyelitis antibody neutralized the mouse virus.

The virus was transferred through mice for a number of passages and was then lost. Attempts are now being made to re-establish it.

In summary we can say that formalin inactivated virus is probably a perfectly safe vaccine inasmuch as no harmful effects have developed after more than 3,000 inoculations. Out of this group but few general reactions have developed. It has been shown that the vaccine stimulated antibody production in experimental animals and in humans. In the latter a single dose gives a response in 75 per cent of children and 2 doses in practically all. The antibody usually develops in about a week, reaching its height in the third to fourth week and with 2 doses is still present after 8 months. Whether or not sufficient and permanent protection is afforded must await further study.

DEPARTMENT OF HEALTH

THE PREVENTION OF POLIOMYELITIS

WILLIAM H. PARK, M.D., *New York City*

The first critical study on the use of convalescent serum in poliomyelitis was made by Dr. Neal during the great 1916 epidemic. As is probably known she has been for many years in charge of the division of the laboratory devoted to the study of cerebrospinal meningitis, poliomyelitis, encephalitis, and other somewhat similar conditions. In that epidemic she and her assistant, Dr. Abramson, saw a great many cases of poliomyelitis in connection with the private physicians in charge of the cases. At the end of the epidemic each of them stated that the cases receiving serum had not done any better than those not receiving it. This statement was put into their printed report to the Department of Health. Dr. Neal did not try to force her opinion upon other physicians and as these naturally

wanted to use anything which had some possibility of doing good, her conclusions were largely overlooked and those of men like Dr. Zingher, followed. Dr. Zingher treated some 75 preparalytic cases with serum and found about 80 per cent of these got well without any definite paralysis. He frankly admitted that he had had no controls but it seems, as these cases had done so much better than had been expected, that the serum should gain the credit. Aycock and Kramer, under a Commission in Boston, supplied the serum for years to all cases. They believed the results to be good. In the 1931 epidemic, Doctors Kramer and Aycock were broadminded enough to decide to test out the question as to whether the serum was of value or not in preparalytic cases. To do this they had to go outside of Massa-

chusetts because they had developed the opinion in the minds of nearly all physicians and people in that State, that the serum was of great value, so they felt they would hardly be allowed to give only half of the cases the serum. Therefore, they utilized a hospital in Hartford and one in Brooklyn during the epidemic. Alternate cases only received the serum. At the end, in a very carefully prepared report, they showed there was no evidence whatever that the serum was of value but that the intraspinal injection sometimes, as Dr. Neal had stated, in 1916, caused meningeal symptoms.

In the 1931 epidemic in New York City and to a less extent throughout the State, cases treated with serum and those not treated with serum were compared and in both instances, no appreciable value could be shown for the serum. Since then the use of serum has had very few advisors in the East. Owing to these results the use of serum therapy has largely been abandoned, but there is still the hope that the serum may still be of value as a preventive. Almost a laboratory experiment was carried out in the children of Bradford, Pa., by Dr. Brebner in 1932. In early September he was called by the Health Officer from New York to advise them as to how to handle a beginning epidemic. He enlisted the Health Officer and the physicians, and 1,200 children were injected within the next three weeks. About 3,000 of the children remained un inoculated. Of course, in the first few days nearly the whole child population was unimmunized. The final results were that only one of the immunized children developed poliomyelitis. This was a light attack and developed on the third day after the infection was believed to have taken place. Some 31 cases developed among the children not inoculated. The results in Philadelphia in two large endeavors were less satisfactory, it being very difficult to decide whether the serum had been of definite good or not.

It is rather interesting that Dr. Schaefer, connected with me in the New York University and the Health Department Laboratories, has produced a serum in horses which after being refined is fifty times as strong as normal convalescent serum. This when given to monkeys will prevent the development of the disease

in animals inoculated within four days of the time of the serum injection and for three days before the serum injection. Although we cannot be very optimistic, yet I believe we should give the serum treatment, as a preventive, a thorough investigation.

Brodie, Kramer, and others have shown the great difficulty that serum would have in reaching the diseased cells of the spinal cord, it being therefore almost impossible to believe that after the spinal cord motor cells have become infected, that serum could do any good. Large amounts of antiserum given to infected monkeys before any symptoms have developed have not shown that they are of any value. Owing to this, there has been a renewal of the attempt to use a vaccine. Early attempts were made as early as 1910 and some have shown fairly good results in monkeys.

Research workers have hesitated to use the vaccine in human beings, largely because the difficulty is not fully realized that the live virus has of causing infection when given intradermally or subcutaneously.

Lately three vaccines have been proposed, about one you have just heard from Dr. Brodie. This unquestionably produces a very definite amount of antibody in the blood of children who have received it with the exception of an occasional child. We are now advocating 2 doses for each child. The second dose should be given after a considerable interval and so produce an increased immunity. Whether the serum will be potent enough to prevent natural infection can only be decided after the vaccinated children have passed through an epidemic. A second vaccine is the one produced by Dr. Kramer. Here a very carefully adjusted mixture of antiserum and living vaccine is made. This is found, when given in three doses, produces a very definite immunity in monkeys. We are just about to use this vaccine in a few children.

Then we have the Kolmer vaccine in which a virus fully virulent for monkeys is used intradermally in children. It is Kolmer's belief, after having used it in several hundred children, that the virus has become so changed in the monkey that it is much less virulent for human beings and when added to this lessened

virulence the vaccine is given into the skin or subcutaneous tissues, there is practically no danger. In this belief he has agreed in general with the belief of others and the lack of any harm up to the present time suggests that the vaccine is at least fairly safe. Whether a child which had not the slightest suggestion of any antibody might become infected can only be told after many hundreds and thousands have been injected. There is no reason to fear that the strains of virus from various cases differ from each other sufficiently to lessen the value of vaccination.

When we think of utilizing poliomyelitis vaccine we are staggered by the enormity of the program. We know that most of the children at a very early age are susceptible. These become gradually less so as the years pass until they reach 5, afterwards the majority are no longer susceptible.

Can we think of immunizing practically all children since we have no test such as Schick or Dick Test to determine who are susceptible?

The partial success of Brodie in developing poliomyelitis in a series of mice made him think for a time that we could use the mice for determining the children who are immune. This however, is now doubtful unless he is able to repeat his experiments and continue to keep the poliomyelitis virus infective for the mice. We can, however, use these vaccines this year in children to the extent at least of 5,000 or 10,000 and so find out whether they seem to be immune or whether about an equal percentage of them develop poliomyelitis in the face of an epidemic as among those who have not been immunized. After this experience we will be much more able to decide whether the vaccine should be urged on all young children or not. Probably we would only do it where epidemics were threatened. If successful, we would have the happiness of protecting a great many parents from the agony of fearing their children would develop the disease in areas where the disease was present.

333 EAST 68TH STREET

PALTRY FINES FOR COLOSSAL LAWBREAKERS

Why medical lawbreakers infest the country and laugh at the law may be partly explained by the paltry fines imposed when they are found guilty. An official report from the Food and Drug Administration in Washington says that "Prosecutions for violations of the Federal Food and Drugs Act, terminated recently, brought fines aggregating \$2,644. The highest fine was \$1,000, assessed against T. M. Sayman, self-styled herb doctor, who made a fortune commercializing a common plant of the American Southwest, called the 'soaproot' or 'Spanish bayonet.' 'Doctor' Sayman, whose business was a combination of mail order and local concessionary salesman, paid the entire fine in one and two-dollar bills.

"The T. M. Sayman Products Company, St. Louis, Missouri, of which 'Doctor' Sayman is practically the sole owner, had shipped in interstate commerce products known as 'Sayman's Healing Salve,' 'Sayman's Vegetable Wonder Soap' and 'Sayman's Liniment.' The salve, composed of camphorated petroleum jelly, zinc oxid and boric acid, was offered as a treatment for eczema and other skin diseases, chronic old sores, and ulcers of the nose, throat, lungs and stomach. The soap, a vegetable oil soap, was to be used along with the salve in its

external uses. The liniment was a mixture of red pepper extract, camphor, sassafras oil, chloroform, alcohol and water, but the labels claimed it to be a remedy for rheumatism, kidney diseases, pleurisy, tuberculosis, grippe, toothache, croup, cramps, hay fever, earache, deafness, ulcers, snake bite, horse colic and whooping cough. All these claims, the government alleged, were false and fraudulent and, therefore, in violation of the Food and Drugs Act. Sayman did not contest the Government's findings and allegations.

"In the early part of his career, Sayman conducted a traveling medicine show. With the growth of his business, he came under the scrutiny of officials in Washington, and was fined \$50 in 1915 and \$40 in 1917, and several lots of his 'Wonder Herbs' were seized and destroyed in 1924."

A New York physician very keenly points out that the "philanthropic foundations," which are trying to regulate medicine, have contributed about \$18,000,000, "while 164,000 physicians in the United States contribute over \$365,000,000 annually in free medical services. It seems rather ridiculous for the articulate \$18,000,000 to seek to regulate the inarticulate \$365,000,000."

WHOOPING COUGH VACCINE AS AN IMMUNIZING AGENT

LOUIS SAUFR, MD, *Evanston, Illinois*

Evanston Hospital, Northwestern University Medical School

A survey, in 1926, of what had been written on vaccine made of the Bordet-Gengou bacillus, led to the conclusion that it had not been used successfully as an immunizing agent. From the maze of literature amassed since Nicolle and Conor¹ first used whooping cough vaccine, three papers appeared outstanding: Von Sholly, Blum, and Smith² of the Research Laboratory of the New York Health Department, reported in 1917 that they injected whooping cough patients and presumably exposed children with the then customary dosage of B pertussis vaccine, B influenza vaccine, and highly diluted milk. Not until they had finished their observations did the maker of the vaccines reveal to them with which type a child had been injected. In their summary they state:

The shortest course was in unvaccinated controls and those receiving inert milk-colored water. The nonspecific influenza vaccine differs very little from pertussis vaccine in influencing the duration of the paroxysmal stage. None, inoculated for prophylaxis with either influenza or pertussis vaccine, contracted the disease. Of 700 children exposed to pertussis in their families, 248 per cent escaped.

They conclude:

More observations and more critical observations with controls for comparison must be made before the case can be considered made out for the curative and prophylactic value of a specific pertussis vaccine.

Seven years later, Madsen,³ Director of the Danish State Serum Institute at Copenhagen, read the Cutter Lecture in Preventive Medicine at Harvard Medical School. In his review on the cough plate method of early diagnosis, and the use of a potent B pertussis vaccine, which had been used extensively for ten years, he said:

No absolutely sure prophylactic effect has been obtained but the infection is lighter—three hundred and sixty-four children were injected (a total of 22,000 million bacilli) one to three months before

being exposed, in spite of this they all, without exception, caught whooping cough.

In the same year, Meyer, Kristensen, and Sorensen,⁴ Denmark's foremost investigators in whooping cough, said:

It is difficult to decide whether it has been possible to prevent the appearance of the disease, i. e. to prove absolute immunization. It is difficult to judge the value of a preventive remedy against whooping cough, as exposure to infection is not synonymous with being infected, and further, certain individuals are probably immune to whooping cough. But, in the first two years of life, so many children die of whooping cough, that every rational means ought to be tried, perhaps in larger doses, more frequently, and applied intramuscularly. Injections often give rise to local reaction in the form of infiltration at the place of injection, in some cases there was a slight increase of temperature, in some high fever, but no more serious symptoms.

These three papers show, respectively, the importance of controls, the inadequacy of 22,000 million bacilli as an immunizing agent, and that exposure to infection is not synonymous with being infected.

With a prejudice against whooping cough vaccine as a therapeutic and prophylactic agent, a five-year study of the immunizing power of whooping cough vaccine was begun at the Evanston Hospital in 1928.⁵ Although the Evanston and Danish vaccines have the same bacterial content (approximately 10,000 million bacilli per cubic centimeter) and are of the same opacity, they are not identical. The Evanston vaccine is prepared from recently isolated hemolytic strains, grown on Bordet medium made with human (not horse) blood, the growth is scraped (not flooded) off. It is killed and diluted in 0.5 per cent phenol in physiologic sodium chloride solution (not in 1 per cent formalin), not "washed," and refrigerated until used, the Evanston dosage totals 8 c.c., the Danish, 2 c.c. The former is injected when exposure to the disease is unlikely. Young nonum

munes were selected from private practice, their nonimmune siblings served as controls.

The prevalence of whooping cough, its severity among afflicted infants and the relative futility of therapeutic measures, warranted the judicious use of this vaccine. Because parents dread this disease, their co-operation seemed assured. As typhoid vaccine had long been accepted as a valuable immunizing agent against typhoid fever, the same general principles were followed. In 1928, one cubic centimeter of the freshly prepared, sterile, pure vaccine was injected hypodermically into alternate arms at weekly intervals for eight successive weeks. After more than a hundred selected young children had been so injected, one cubic centimeter was injected into each arm (simultaneously) at weekly intervals for four successive weeks, for more than a year. Since 1930, the total of eight cubic centimeters is divided, as follows: one cubic centimeter is injected, hypodermically, in the deltoid region of each arm; a week later, 1.5 c.c. is injected in the biceps region of each arm; a second week later, 1.5 c.c. is injected into the triceps region of each arm. In five years (1928-32), a total of 8 c.c. was injected into each of 394 selected nonimmunes, whose age averaged about 14 months, i. e., each child received about 80,000 million dead pertussis bacilli.

Syringe and needles are sterilized by heat (oven at 250° F. for one hour), the rubber cap of the vial and the site of the injection are briskly rubbed with sterile cotton saturated with 95 per cent alcohol. As a rule, the local reaction (redness, tenderness, and induration) disappears within a day or two, but occasionally, a nodule persists for a few weeks. More than 11,000 individual injections have been given in the course of seven years without producing a pustule, abscess, or scar. No injection has been postponed on account of the severity of a reaction. Parents are instructed not to take the child's temperature, nor to apply anything locally. If the child is restless, the next feeding is diluted or omitted, and if necessary, the child is kept in bed until the next day. In no instance has the severity of a reaction approached the mildest smallpox vaccination reaction.

Should an exceptionally pronounced reaction occur, the subsequent injection should be limited to 1 c.c. in each arm, and an extra (bilateral) injection should be given a week after the third (i. e., 1 c.c. in each arm for four successive weeks). Injections should not be given in the area of a previous injection of toxoid.

Although, prolonged, intimate contact of a nonimmune with a pertussis patient in the catarrhal or early paroxysmal stage of the disease (positive cough plates), is not synonymous with infection, it is the best way to determine susceptibility and immunity. The failure of an injected child to contract the disease when so exposed, forms the basis of evidence that the Evanston vaccine confers active immunity. The medical histories of these 394 children were accurately known, all had been under my care before the injections, and most of them were seen from time to time thereafter. Although reasonably certain that none had contracted the disease, a questionnaire was sent to each of these families in April, 1935. Twenty-seven of the injected children in twenty-one families had been intimately exposed to the disease in their twenty-five control brothers or sisters, and one hundred and fifty-seven of the injected children had been casually exposed at play, in school, and elsewhere, a total of 336 times. None contracted whooping cough.

All of the nonimmune controls with whooping cough in these families, on the other hand, contracted the disease. In two families, infants born subsequent to the immunization, contracted the disease from the control, but the children, injected years previously, and similarly exposed, failed to contract the disease. As far as could be ascertained, in not one of these 394 children injected with the Evanston vaccine has whooping cough occurred. The most convincing evidence of active immunization with the Evanston vaccine, is the crucial test of the Macdonalds.⁶ Two of their four nonimmune sons were vaccinated with the Evanston vaccine in February, 1932. Five months later there was instilled intranasally a weak suspension of a freshly isolated, living culture into each of the four children. The two unvaccinated children developed typical

whooping cough (positive cough plates, marked lymphocytosis, paroxysmal cough for weeks, with gagging, vomiting, and whooping), the two vaccinated boys remained well, although they were most intimately exposed to their brothers throughout their illness. Subsequent complement fixation of all four boys was four plus.

Northwestern University Medical School has recently granted to two biological laboratories, the privilege of making this vaccine according to our detailed specifications. Freshly isolated, hemolytic strains are supplied to them each month. Human blood is used in the culture medium. They co operate with us in an endeavor to match the concentration of each lot of vaccine with our standard. Uniformity of this approved commercial vaccine is essential, and of paramount importance.

Since 1932, about 1400 infants and young children (averaging about 11 months) have been injected with one or the other of these two approved commercial vaccines. This includes over 500 homeless ("Cradle") infants, less than six weeks of age (the first 400 received a total of 6 c.c., the last 100 have received the customary 8 c.c.). All of them have been legally adopted. Six have been quite definitely exposed, two in their foster homes, the other four casually but intimately exposed. Two escaped, the other four contracted the disease in mild form. The age of the other injected non-immune children averaged about 14 months. They are distributed approximately as follows: Health Department, 350, orphanage, 175, and private patients, 400. In nineteen families, thirty-six of these 1100 nonimmunes, injected with commercial vaccine No. 1, were exposed to the disease in the twenty-six controls of their families. Thirty injected nonimmunes have been casually but quite intimately exposed, a total of 41 times. In all, six injected nonimmunes contracted the disease more than three months after completion of the injections. Two of these failures were in brothers who had been injected shortly after they had recovered from measles. As far as could be ascertained, none of the 300 children injected with approved commercial vaccine No. 2, has been exposed, nor has any child contracted the disease.

About 90 per cent of the nonimmunes injected with approved commercial vaccine, did not contract whooping cough when they were exposed. Since the majority of exposed nonimmunes contract the disease under similar circumstances, it seems logical to infer that, as a rule, immunization will follow the injection of 8 c.c. of the vaccine, provided exposure does not occur within four months.

The following three families are offered as testimony that 8 c.c. of approved commercial vaccine will usually protect.

Ronald, Neil, and Paul C. (aged 3½, 1½, ¼ years) were injected with approved vaccine No. 1 in December, 1932. Jack and Marilyn (aged 8 and 6 years) served as nonimmune controls. In March, 1935, Marilyn had passed the height of the paroxysmal stage of pertussis. Her cough plates were positive, the white cell blood count was 10,550, the differential count was polymorphonuclears, 27, small lymphocytes, 69, large lymphocytes, 3, transitional, 1. Jack was coughing in paroxysms. His white cell count was 17,800, polymorphonuclears, 49, small lymphocytes, 41, large lymphocytes, 7, eosinophiles, 3. In the course of a month, Wayne (1½ years old control) developed severe and prolonged pertussis, white cell count 15,990, polymorphonuclears, 20, small lymphocytes, 67, large lymphocytes, 10, eosinophiles, 3. Lee (6 months old control) likewise developed severe and prolonged pertussis, white cell count, 38,100, polymorphonuclears, 18, small lymphocytes, 74, large lymphocytes, 6, eosinophiles, 2. Both whooped and vomited for weeks. Ronald, Neil and Paul injected more than two years previously, continually exposed to their three coughing brothers and sister, in the three roomed basement where the family lives, did not contract pertussis.

Jack M., 2 years old, was injected with approved vaccine No. 1, in March, 1932. Joan, 5 years old served as the nonimmune control. In August, 1932, Jean, Joe and Jerry, triplets aged 7 months, were injected with approved vaccine No. 1. In February, 1935, Joan was in the paroxysmal stage of pertussis. During the following six weeks she stayed in bed because the cough, vomiting, and whooping were very severe. Her white cell count was 18,100, polymorphonuclears, 45, small lymphocytes, 45, transitional, 1, eosinophiles, 3. The triplets and Jack, continually exposed in the small apartment, to their sister throughout the catarrhal and paroxysmal stage, did not contract pertussis.

Mary, Dan, Tom, and Jean M. (aged $4\frac{1}{2}$, $2\frac{1}{2}$, $1\frac{1}{2}$, $\frac{1}{2}$ years) were injected with approved vaccine No. 1 in November, 1933. A year later, Mary contracted pertussis in school. Her cough plate was positive on two occasions, the highest white cell count at the height of the mild course was 11,500; polymorphonuclears, 42; small lymphocytes, 55; large lymphocytes, 3. The only explanation for this failure is that some children of four or more years might require more than 8 c.c. of vaccine for complete immunization. Although intimately exposed to Mary throughout the catarrhal and paroxysmal stages, the three younger children did not develop pertussis.

Because whooping cough is much more prevalent than diphtheria, smallpox, or scarlet fever, and is serious only early in life, the following sequence of immunization has been found practical. Whenever possible, the pertussis vaccine is given first, preferably at about eight months. Because four months are apparently necessary for most children to acquire complete immunity by the routine procedure, no other immunization is attempted during that period of time. Diphtheria immunization is given at a year. The Schick test is performed at about eighteen months. When the Schick test is read and found negative, the smallpox vaccination is then performed. Scarlet fever immunization is usually performed at four years.

Quite a number of physicians, in var-

ious parts of the country, have reported instances of protection in their series of children injected with approved commercial vaccine. However, a total of ten failures have been reported by seven physicians during the past two and a half years.

Factors, which apparently influence the immunity response, may be summarized as follows:

1. The quality of the vaccine (antigen content) is influenced by the strains used, and the concentration of the vaccine.
2. The potency of the vaccine (at the time of injection) is reduced, if the vaccine was not kept cold.
3. The dosage for children older than 4 years, may require somewhat more than a total of 8 c.c.
4. Illness (e. g. measles) just before or after the injection, probably decreases the immunity response.

Conclusion

Eight cubic centimeters of an especially prepared Bordet-Gengou pertussis bacillus vaccine (containing approximately 10,000 million bacilli per cubic centimeter, divided into three (bilateral) weekly subcutaneous injections) conferred prolonged immunity to 90 per cent of the young nonimmunes, who were exposed from four months to seven years subsequent to the injections. The best age for inoculation is about the eighth month of life.

References

1. Nicolle, C., and Conor, A.: Vaccinothérapie dans la Coqueluche, *Compt. rend. Acad. D. sc. Par.* 66:1849, 1913.
2. Von Sholly, A., Blum, J., and Smith, L.: The Therapeutic Value of Pertussis Vaccine in Whooping Cough, *J.A.M.A.* 78:1451, 1917.
3. Madsen, T.: Whooping Cough—Its Bacteriology, Diagnosis, Prevention and Treatment, *Boston M. & S. J.* 192:50, 1925.
4. Meyer, A., Kristensen, M., and Sörensen, A.: Whooping Cough Vaccination, *Acta Paediatrica* 4:21, 1924.
5. Sauer, L.: Whooping Cough: A Study in Immunization, *J.A.M.A.* 100:239, 1933; 101:1449, 1933.
6. Macdonald, H., and Macdonald, E.: Experimental Pertussis, *J. Inf. Dis.* 53:328, 1933.

A "CENTRAL HEALTH SERVICE" IN OMAHA

The doctors of Omaha have organized a "central health service" for low income groups, along lines approved by the A.M.A., and the *Bulletin* of their Medical Society reports that "subscriptions to the service outstrip every optimistic prediction." The editor says that in no other undertaking within his memory "has there been such an indication of almost unanimous co-operation and willingness on the part of the membership. Physicians and dentists, older or younger in age, regardless of the economic

nature of their practice, have fallen in line with the ideals and aims of the Service to the extent that its working success may be reasonably assured even by the few remaining doubters. It is a delight to see the organized profession in leadership of a worthy effort. A system under which all people in the community will be enabled to take advantage of modern medical and dental facilities will be a benefit not only to the public but to the doctors as well."

ULTRAVIOLET IRRADIATION FOR SECONDARY ANEMIA

Preliminary Report

RICHARD KOVACS, M D, AND I M LILLY, M D, New York City

The many claims and counterclaims of the effectiveness of ultraviolet irradiations for secondary anemia have induced the authors to investigate the subject very carefully with an object to establish, if possible, the place of ultraviolet radiations in the therapy of anemia

A group of 59 patients, mostly with chronic diseases, were selected for the tests. Patients with malignant diseases and pernicious anemia were excluded. Two patients died during the experiments, one from tuberculous peritonitis and the other of uremia, one case of ulcerative colitis was discontinued because of its severity, necessitating ileostomy and transfusion

The 56 patients who completed the tests were divided into two groups. One group comprising 19 was for control. The other group of 37 was to receive the irradiations. None of the patients in these groups had, prior to this test, received exposures to direct sunlight or to ultraviolet radiations. None of them had received, nor did receive during the test, iron, arsenic, liver and other medication which would tend to activate hematopoietic organs. The patients included both sexes. The youngest treated was four years old and the oldest 80 years. The average age was 39 years plus.

The quartz mercury arc was selected as the ultraviolet source. Two lamps of standard therapeutic type, one operated on direct current through the burner and the other with alternating current in the burner, were used. These lamps had been in use for some time in the Physical Therapy Department of Montefiore Hospital. The burners, while not new, were in good condition. The ultraviolet emission from these lamps was checked prior to and during the experiments by Wm. T. Anderson, Jr., Ph D., physicist of Newark, N. J.

Since the factor of psychology might conceivably exert some influence in ex-

periments of this type, the Control Group was divided into two groups. One group of 10 was to receive no irradiations. The other group of 9 was to receive the quartz mercury arc radiations after passage through a glass filter of Noviol O Corning glass. These latter would receive absolutely no ultraviolet radiations, but would experience the visible light and infrared.

The Irradiation Group was also subdivided. One group of 18 was to receive irradiations through a glass filter of clear Correx D glass. These would thus receive ultraviolet with most of the very short wave length erythema-producing radiations removed. The second group of 19 received the complete unfiltered radiations from the lamps. The accompanying spectrogram illustrates the type of ultraviolet radiations received by the two groups.

The irradiation procedure was planned and controlled in such a manner that all patients receiving light in any of the three groups were irradiated with approximately equal total quantities of light energy. Since the employment of glass filters reduced the light intensity considerably, proportionately longer irradiations were given when filters were used in order that the total energy received by each group be about the same. The lamp intensities, distance and treatment times selected, were such that the ultraviolet groups received suberythema doses. The susceptibility of each patient to ultraviolet radiations was determined by control irradiations made on a small area on the flexor surface of the forearm, and the initial treatment times adjusted accordingly. A fixed distance of 28 inches between the center of the quartz arc tube and the upper surface of the patient was maintained for all irradiations. The center of the lamp was placed mid-trunk.

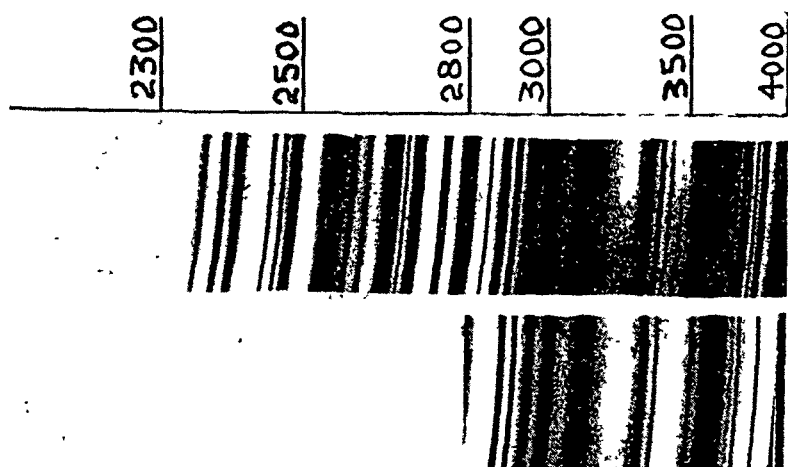
Patients were exposed daily during two weeks, Sunday excepted, and usually at

This study has been carried on at the Physical Therapy Department of Montefiore Hospital, with the aid of a grant from the Council on Physical Therapy of the American Medical Association

the same time each day. For the initial treatments irradiation times between 2 and 5 minutes were employed for the unfiltered radiations. These times were gradually increased until after the fourth treatment a 10 minute period was reached and maintained. The lamp intensities were such that the total radiation at the patient-lamp distance of 28 inches for frequencies between 1,850 Angstroms in the ultraviolet to 14,000 Angstroms in the infrared was 1,025 microwatts per square centimeter, the ultraviolet component shorter than and including 3,130 Angstroms being 385 microwatts per square centimeter for the A.C. lamp and 265 microwatts per square centimeter for the D.C. lamp. These measurements were

made under the same conditions and with the same thoroughness as were the Irradiation Groups. The subdivision of the Control Group which received irradiations through the Noviol O filter (i.e., no ultraviolet but the visible and infrared component from the lamps) received the same careful attention to detail as did the ultraviolet groups.

The blood examinations were made in the hematological laboratory of the Montefiore Hospital. Each patient under observation was subjected to three complete blood counts. This count included hemoglobin, red blood cells, and white blood cells; the latter also being evaluated as polymorphonuclears, staphylocytes, eosinophiles, basophiles, lympho-



*Spectrum
with
unfiltered
burners.*

*Spectrum
with
Correx-D
filter.*

made by photocells calibrated and checked against Radiation Standard No. C-201 of the National Bureau of Standards and also against a Recording Ultraviolet Meter calibrated with the assistance of Dr. W. W. Coblenz at the National Bureau of Standards. The Correx D filter, as a result of reflection and absorption losses, reduced the total intensity to about one-half, and the Noviol O filter reduced it to about one-third. Hence, when these filters were used, treatment times were increased approximately by two and three times respectively.

The Control Groups were concurrent with the Irradiation Groups, and were supervised and examined under identi-

cally the same conditions and with the same thoroughness as were the Irradiation Groups. One count was made just prior to treatment or isolation as a control, another after the end of the first week, and the third after the completion of the treatments. Hemoglobin was estimated by the Sahli method and checked against the Van Slyke oxygen method.

The results are summarized in Tables I and II. Table I gives the number of patients, their diagnoses, and their allotment to the Control and Irradiation Groups. Table II gives the average Hemoglobin, Red Blood Cells, White Blood Cells, Lymphocytes and Polymorphonuclears for each group in each of the three counts. It also indicates the number

of patients in each group which had shown an increase after the two week period

Observations were made and reported by the Hospital Service that many of the patients who received the ultraviolet treatments, particularly those who had arthritis, nephritis, colitis, and tuberculosis, showed marked improvement in their general condition. They gained weight, had an increase in appetite, were more restful at night, and commented that they felt more comfortable. On the other hand, the patients with diabetes mellitus and cardiac diseases who had re-

ceived ultraviolet irradiations showed no recognizable improvement

The two cases of secondary anemia of unknown origin, both of whom had received the unfiltered ultraviolet radiations, felt subjective improvement to such a degree that a request was made to continue their further irradiation with the ultraviolet. It might be added that one of these cases had hemoglobin as low as 29 per cent, which value had shown no improvement as a result of the irradiations. The hemoglobin in the other case was 63 per cent, and had shown a slightly rising tendency during the tests

Discussion

The authors are not attempting in this preliminary report to pass judgment on the efficacy of ultraviolet irradiation as an aid in secondary anemias. They do not consider that any conclusions may be justly attained at this time. The formulation of such conclusions must await the completion of many other experiments involving other types of patients, other forms of secondary anemias, and with variations in the irradiation technique.

The experiments reported here relate to patients confined indoors and afflicted with chronic infections, in many cases

multiple and of such a nature that little or no change in the blood picture could be expected while the original disease or foci remained. In addition the maintenance of a strict control necessitated that the period of irradiation be limited to within two weeks. Erythema doses could not be prescribed. Even supposing that ultraviolet irradiations might be moderately effective in altering the blood picture, not much change could be anticipated during tests with such patients. In spite of this rather unfavorable situation, it was hoped and expected that the experiments might produce sufficient re-

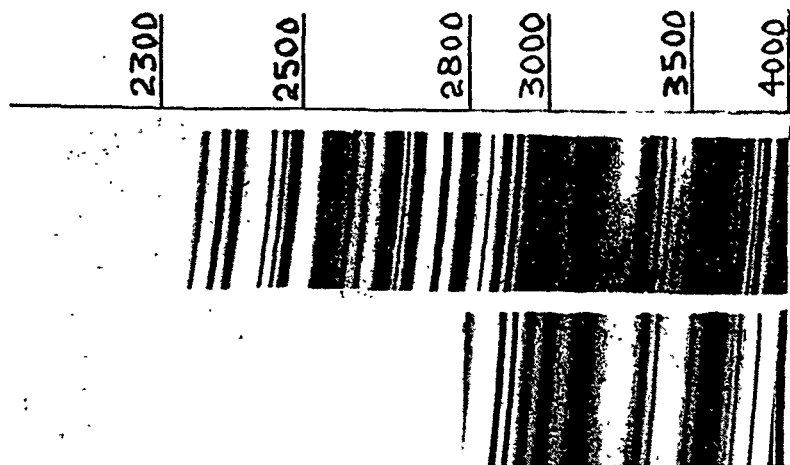
TABLE I TEST GROUPS

Patients	Diagnosis	Control		Irradiation	
		No Light	No. of	Core & D	Unfiltered
2	Anemia—unknown origin				2
14	Chronic infectious polyarthritis	2	3	4	5
1	Bronchial asthma		1		
3	Chronic ulcerative colitis		1		2
1	Cerebral vascular thrombosis	1			
3	Chronic rheumatic cardio-vascular	1		1	1
2	Diabetes mellitus			2	
1	General eczematous dermatitis			1	
3	Chronic arteriosclerotic cardio-vascular			2	1
1	Post encephalitis				1
1	"				1
1			1		
1					1
3	Chronic glomerul nephritis			2	1
1	Multiple sclerosis		1		
4	Chronic osteomyelitis	3		1	
1	Vascular myelopathy		1		
1	Peripheral vascular disease	1			
1	Polynuritis			1	
1	Tuberculosis of the bone			1	
9	Chronic pulmonary tuberculosis	2	1	3	3
1	Hyperthyroidism (post thyroidect.)				1
56		10	9	18	19

the same time each day. For the initial treatments irradiation times between 2 and 5 minutes were employed for the unfiltered radiations. These times were gradually increased until after the fourth treatment a 10 minute period was reached and maintained. The lamp intensities were such that the total radiation at the patient-lamp distance of 28 inches for frequencies between 1,850 Angstroms in the ultraviolet to 14,000 Angstroms in the infrared was 1,025 microwatts per square centimeter, the ultraviolet component shorter than and including 3,130 Angstroms being 385 microwatts per square centimeter for the A.C. lamp and 265 microwatts per square centimeter for the D.C. lamp. These measurements were

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violet group the average increased from 1.1 to 1.4 per cent, 10 of the 19 cases in this group showing increases. The reality and significance of these findings requires further investigation. The monocytes and the basophiles did not indicate any trend. The reality of these "trends" must be established or disproven by future and further experimentation.

Future studies on the effect of ultraviolet irradiation on the blood picture would include the maturation and development of the new red blood cells, particularly the reticulocytes. This may present the evidence of the effect of irradiation indirectly on the hematopoietic organs, and may account for the general improvement of many of the patients cited without showing an increment in the hemoglobin or red cell count. It may also be advisable to make a study of the effect of irradiation on the blood

platelets and determine the clotting time on these patients. This further study of the physical picture of the blood in patients with secondary anemia might also indicate possible influence by ultraviolet on blood chemistry.

The authors wish to thank, for their kind co-operation, Dr. L. Lichtwitz, Chief of Medical Service, Dr. P. S. Goodhart, Chief of Neurological Service, Dr. H. Wessler, Chief of Tuberculosis Service, and the late Dr. P. W. Nathan, Chief of Orthopedic Service. The authors also appreciate greatly the fine co-operation of Dr. S. Melamed whose careful blood analyses were essential, and extend to Dr. W. T. Anderson, Jr., their appreciation for his light measurement and suggestions relative to irradiation technic.

1100 PARK AVENUE OF
MONTEFIORE HOSPITAL

MEETING TO BE HELD BY THE LATIN-AMERICAN CONGRESS OF PHYSICAL THERAPY, X-RAY, RADIUM

The Congress will hold its first annual meeting in Mexico City from August 29th to September 5th, as announced by Dr. Cassius Lopez de Victoria, executive director of the organization. The National University of Mexico will act as host to their North American colleagues, and the government will participate in extending hospitality to the delegates.

To facilitate the attendance of American physicians at this Congress, a nineteen-day convention cruise has been arranged, with steamer, rail, hotel, and sightseeing costs included in one all-expense fee. The convention cruise and all of its advantages will be available not only to the physicians, but to members of their families and their friends.

Five special tours to the Latin American Congress and return, have been arranged by the American Express Company who have been asked to direct the Congress Cruise. The first of these, which is expected to prove most popular, is a round-trip by steamer, the S.S. *Yucatan* having been especially chartered for the purpose.

It will also be possible for physicians to make the round-trip by rail, or to go by steamer and return by rail. Special arrangements have also been made for a return trip by rail, including a stop-over at Kansas City, for those who desire to attend the 14th Annual Scientific Session Congress of Physical Therapy on September 9, 10, 11, and 12th.

In addition to first class hotel accommodations in Mexico City, delegates registered for the cruise will enjoy sightseeing trips to principal points of interest in Mexico City, a thirty-mile drive to the pyramids of Buried City of San Juan Teotihuacan, all day water trips to Xochimilco and the floating Gardens, and to Cuernavaca, and to Toluca and the desert of the Lions. On the outward bound trips the cruise will stop at Havana, and Progreso, and returning will call again at Havana.

The medical activities of the Congress will be held in the faculty rooms of the National University School of Medicine and will be divided into sections representing medicine and surgery, fractures in their various specialties, electrosurgery, fever therapy, short and ultra short wave therapy, light therapy, massage, radium, and x-ray therapy and exercise.

The officers of the Congress are Norman Edwin Titus, M.D., president; William Bierman, M.D., first vice-president; Heinrich Franz Wolf, M.D., second vice-president; Madge C. L. McGuiness, M.D., secretary; and Cassius Lopez de Victoria, M.D., executive director.

Delegates to the Congress desiring to present papers, will submit the titles of their papers together with an abstract to either Dr. Madge C. L. McGuiness, 1211 Madison Avenue, New York City, or Dr. Cassius Lopez de Victoria, 1013 Lexington Avenue, New York City.

NEW YORK STATE JOURNAL OF MEDICINE

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EDITORIALS

Doubtful Benefits

Whatever the advantages of "integration" in law and dentistry, there is little reason to believe it would bring any great benefits to medicine at the present time. This movement is in a sense a reversion to the guild system. Under it the entire profession in a given state is organized into a public corporation whose officers set the qualifications for licensure and exercise wide disciplinary powers over all licentiates. In other words, the corporation replaces both the state licensing and examining board and the state medical society. Expulsion from the corporation is equivalent to revocation of the license to practice. Mitigating this board authority to some extent is the fact that every physician would be a member of the corporation, possessing a vote in its management—and paying the dues imposed!

While the profession is given full control over its internal affairs by this process, there is more than a little danger of autocracy within the corporation. The present distribution of power among state boards and professional societies provides an automatic check upon aggressions from whatever source. Exercising what many would consider excessive authority within the profession, the corporation would have no power to proceed against the cults and unlicensed practitioners who do not figure greatly in law or dentistry

but are an ever present problem in medicine.

The House of Delegates of the A.M.A. has the entire question of integration under consideration with a view to evaluating its benefits and disadvantages to the profession as a whole. Pending the results of this study, any medical society would be extremely ill-advised to commit itself to such a movement.

"Eternal Vigilance . . ."

From the viewpoint of the practicing physician, there are strong elements of potential danger in that portion of the Economic Security Act which deals with services for crippled children. Here there is no pretext of public health education or disease protection. The project is patently one of individual medical care under the direction of the Federal Children's Bureau. Unless this program is carried out with the utmost discretion and tact, it is obvious that it may clash with the interests and rights of the private practitioner.

Like the other public health features of the Economic Security Act, Title V calls for collaboration with medical, health, and nursing organizations. The *J.A.M.A.* reports that an official representative of the American Medical Association will probably be invited to serve on advisory

committees to the Surgeon General and the Chief of the Children's Bureau and all of the plans drawn up by the latter organization envisage the co operation of the state medical societies. In addition assurances have repeatedly been given that there is no intention to compete with private curative practice.

Under these circumstances state medical societies must prepare to co operate with responsible administrative officials to the extent of their facilities, in order to be able to preserve and defend the rights and interests of their members. As long as the program adopted does not infringe on medical prerogatives or compete with the private practitioner it will have the loyal assistance of the organized profession.

An Unethical Procedure

Professional ethical procedures have stood the test of time because they not only protect patient and doctor, but they constitute, in effect, a code of *fair play*. Anything done by a physician which by any stretch of the imagination would result in the advantage of one over another almost automatically falls under the disapproval of some part of the accepted rules.

The relationship of the medical profession to that of pharmacy has long been close and cordial, and between these two professions there too has developed an ethical method of dealing. This condition should at all hazards be preserved.

There has come to our knowledge recently an effort by a commercial agency to purchase from physicians samples of pharmaceuticals which drug manufacturing firms have been wont to distribute free to the profession. Exactly what the "King Exchange Co" does with the samples it purchases in a "confidential" and "reliable" manner is not known to us. We would venture the guess, however, that these drugs eventually reach market at "cut rates."

We contend that the selling of such drug samples obtained gratis is a violation

of the ethical standard which our society sets. In the interest of fair play to the pharmaceutical profession, we should discountenance this practice. Nor should we have commercial dealings with any agency which buys gratuitously distributed samples, no matter how "confidential" or "reliable" the services offered may be.

Protecting Scientific Degrees

Diploma mills were dealt a severe blow when Governor Lehman signed the McNaboe bill dealing with professional schools. Fraud, however, is still perpetrated on the citizens of the state by another form of deception. This is worked particularly in the shoe trade, where advertising slogans use the title "doctor" to designate a brand of shoes. The inference which is sought to convey to the public is that for scientific reasons the particular shoe was specially designed by some doctor and has medical endorsement.

In most instances no doctor of any sort has had anything whatever to do with either the design or the construction of the shoe. The medical title is the only medical aspect which the commercial product possesses.

It would seem that as a corollary to the excellent law cited above, legislative action is needed to stop this abuse of the public's confidence.

Pneumococcus Type VIII

The ability more exactly to differentiate the various types of pneumococci, which were hitherto assembled under the classification of Group IV¹, has added stimulus to the further investigation of pulmonary and other infections due to the pneumococcus. Even the well established Group III pneumococcus has not escaped the finer differentiations which modern bacteriological methods afford. This

¹ Cooper, G., Edwards, M., and Rosenstein, C. "The Separation of Types Among the Pneumococci Hitherto Called Group IV, and the Development of Therapeutic Antisera for These Types." *J. Exper. Med.* 49: 461, 1929.

strain of pneumococcus has always been considered the most virulent of the family. Nevertheless, clinicians have noted that not all patients who suffered from disease caused by this strain reacted alike: some presented a milder course with a favorable outcome, while others, by far in the majority, presented an infection which terminated fatally.

In 1928, Sugg, Gaspari, Fleming, and Neil² described a virulent strain of pneumococcus which was related to the pneumococcus III immunologically but otherwise was not identical with it. Rabbits are more susceptible to this strain (called the Thomas strain or Group VIII) than mice who more readily succumb to Type III. Again, Type VIII pneumococcus shows a capsule smaller than that of Type III, its hemolytic properties are more marked, and its organisms tend to form chains.

Bullowa³ has studied this type of infection from the clinical standpoint. He found that in adults, its incidence as the causative factor in pneumonias was 5.9 per cent. It presents a much less serious outlook than pneumonia due to pneumococcus III. While it invades the bloodstream more frequently than Type III does, it yields a smaller percentage of fatalities. Clinically, it resembles the "streptococcus mucosus" of older literature in that, after an apparent subsidence of all symptoms, it may suddenly invade the meninges or bloodstream with a resultant fulminating fatal lesion.

This strain seems to attack adults more frequently than it does children. It is to be suspected as present when the organisms recovered from the sputum occur in chains. The exact diagnosis of this variety of pneumococcus infection can be made from the agglutinin reactions. These agglutinins, where demonstrable, may be transferred to therapeutic serum with decided beneficial effect to the sufferer from this strain of pneumococcus.³⁻⁴ This is of special importance in view of the common belief that serum therapy is efficacious only where the Type I pneumococcus is the causative factor. The

marked contrast in the results obtained by Bullowa in those patients who had Type VIII pneumonias and were treated without serum (61.9 per cent fatality) and those in whom serum was used (only 16 per cent of whom died), speaks for the need of a more accurate determination of the strain of pneumococcus in the given case if specific serum therapy is to be given a fair trial to evaluate its usefulness in the therapy of pneumonias.

² Sugg, J. Y., Gaspari, E. L., Fleming, W. L., and Neil, J. M.: Studies on Immunological Relationships Among the Pneumococci, etc., *J. Exper. Med.* 47:1917, 1928.

³ Bullowa, J. G. M.: Pneumonias Due to Pneumococcus Type VIII, *Am. J. Med. Sci.* 190:65, 1935.

⁴ Bullowa, J. G. M.: Therapeutic Pneumococcus Type VIII (Cooper) Serum, *J.A.M.A.* 102:1560, 1934.

Value of the Heterophil Antibody Test

The study of the antibody reactions of human blood has contributed many notable advances which have, in turn, been successfully applied to the diagnosis of disease. Among the more recent additions to our knowledge in this field are the works of Bernstein,¹ Weinstein and Fitz-Hugh,² and others who have investigated these reactions in leukemias and in allied conditions.

It has long been known that the leukemias show a definite disturbance in the formation of specific antibodies. This has been interpreted as an interference with the mechanism which produces them, due either to an inhibition or complete loss of function. Moreschi³ found that leukemias produced no specific agglutinins following injections of typhoid vaccine, whereas the controls he employed all

¹ Bernstein, A.: The Diagnostic Importance of the Heterophil Antibody Test in Leukemia, *J. Clin. Invest.* 13:677, 1934.

² Weinstein, G. L., and Fitz-Hugh, T.: The Heterophil Antibody Test in Leukemia and Leukemoid Conditions, *Am. J. Med. Sci.* 190:106, 1935.

³ Moreschi, C.: Ueber Antigene und Pyrogene Wirkung des Typhus Bacillus bei Leukämischen Kranken, *Ztscher. f. Immunitätsforsch. u. Exper. Therap.* 21:410, 1914.

showed agglutinin formation. In addition to the loss of specific antibody formation, Bernstein showed that in the leukemias and in certain leukemoid conditions, there also occurs a marked diminution in the heterophil antibody, namely, that group which is capable of reacting with antigens totally unrelated to the specific antigens. Furthermore, it has been demonstrated that injections of horse serum will result in a substantial increase in the heterophil antibody in normal individuals while this phenomenon does not occur in certain types of leukemias and in certain allied diseases.

Utilizing these basic fundamentals, Bernstein endeavored to determine the quantitative presence of heterophilic antibodies in normal individuals and in those suffering from a variety of diseases. He utilized dilutions ranging from 1-1 up to 1-16. The dilutions up to 1-4 he classified as Zone 1, from thence to 1-16 as Zone 2, and all above as Zone 3. Most of the cases investigated fell into Zone 2, but his significant finding was that of the 21 cases of leukemia which he subjected to this test, 20 had a heterophil titre that fell within Zone 1. Weinstein and Fitz-Hugh not only have corroborated this but in addition have shown that their cases of leukemia had a heterophil antibody content which could not be demonstrated above a serum dilution of 1-1. This low figure was uninfluenced by the leukocyte count, by the type of predominating cell or by radiation.

Since, in leukemias, the heterophil titre falls in Zone 1, it can be assumed with a reasonable degree of certainty that where a reading in Zone 2 or over is obtained, leukemia is not the cause of the patient's illness. According to Weinstein and Fitz-Hugh, this test can be subjected to further refinement in its employment as a diagnostic measure. The intramuscular injection of horse serum produces no rise in the heterophil antibody content in chronic lymphatic leukemias, aleukemic leukemias, lymphosarcoma, and Hodgkin's disease, whereas in normal individuals and in persons suffering from myelogenous

leukemia a decided increase in the heterophil titre is noted following the introduction of the horse serum.

By far the most important clinical aspect of this work is the utilization of the heterophil antibody titre in the differentiation of leukemias and leukemoid diseases from inflammatory adenopathy and infectious mononucleosis. The latter condition, in view of the hematological picture often causes the attending physician considerable alarm as to the eventual prognosis in a given case. This test enables him to differentiate quickly between the infectious type of mononucleosis and the more fatal types of leukemias. All cases of infectious mononucleosis have been found to have a heterophil titre which falls in Zone 2, or in Zone 3.

The suggestion advanced that a biological difference exists between the myelogenous and lymphatic groups of leukemias cannot at the present time be considered as anything other than an hypothesis which deserves further investigation.

CURRENT COMMENT

THE *New York Medical Week* of July 27 comments editorially upon "Bureaucratic Luxuries." It cites a contemporary issue of the *New York World-Telegram* as sounding a warning on such 'luxuries' that threaten to devour our national substance. *Medical Week* corroborates the governmental experience with opposition to reduction in expenditures not only from recipients but from the army of governmental employes whose jobs will be at stake. The editorial comments on the experience of other nations with obligatory sickness insurance. There seems a constant attempt on the part of beneficiaries to secure expanded services and increased benefits, and added to this each year sees a rise in purely administrative expenditures. Today there are almost as many lay employees of the German *Krankenkassen* as there are physicians. In England, the administration costs of the insurance system totalled twenty-five millions of dollars in 1930, almost 15 per cent of the total outlay—and there seems to be no reason to expect that this is the top. The *World Telegram* correctly observes that "a government bureau is a very human institution" responding "naturally to the law of self preservation." Congressmen too,

believe in self-preservation. So jobs are created for their friends in the bureau. And thus there is rapidly developed a community of interest which tends to make the bureau grow larger and costlier.

Obligatory pre-payment for sickness speedily takes its place among the "bureaucratic luxuries" that are beyond our means.

IN ANNOUNCING that the Brooklyn Cancer Institute would be continued, Dr. S. S. Goldwater, Commissioner of Hospitals of New York City, said: "Experience has shown that the management of concentrated clinical material by physicians trained especially in the study of certain diseases results in the greatest benefits to patients and the acquisition of new knowledge. This is especially true in the treatment of cancer. The prevailing methods of treatment, methods accepted throughout the world, have been developed mainly in a very small number of outstanding cancer clinics, mainly in Sweden, France, and in the United States."

THE *New York Times*, speaking on July 27, 1935, on "Savings," commented on the fact that despite the unemployment which is still widespread, and the relief rolls which are near their peak, millions of Americans are able to earn money *and to save it*. The National Association of Mutual Savings Banks reports that deposits have increased by \$112,000,000 during the first six months of 1935 and reached a total of \$9,870,000,000, which is within 2 per cent of the all-time "high" which was attained January 1, 1932. Combined assets also were close to the record, and the number of individual accounts reached the highest figure in banking history. On the first day of July there was 13,896,605 depositors in mutual savings banks. The *Times* comments that such an increase taking place on a scale wide enough to affect a very large section of the American public is significant. Americans are earning enough to put aside savings. This comment and the facts upon which it is based is good news to those of us who have never believed that Americans would not master the depression. A country where thrift, initiative, and individual efforts have always heretofore brought rewards cannot and will not "go left" either politically or medico-sociologically.

EXPERIENCE HAS somewhat dampened the enthusiasm of the profession for surveys of various aspects of medical practice. Particularly when such investigations are under the auspices of, or supported by, lay funds, they have a habit of developing into propaganda for principles or policies to which the investigating organizations are committed.

THE SPECIAL REPORT of the Bureau of Medical Economics of the A.M.A., under date of June, 1935, says: "While numerous proposals have been elaborated by theorists for new schemes, the only significant results in securing more and better medical care for all sections of the population have had their origin in the medical profession. Nearly 200 different experiments are being conducted or considered by county medical societies in the United States; these medical societies are trying almost every method that has been proposed for such organization of medical services."

"COMPULSORY HEALTH INSURANCE as organized and administered in most countries where it is in force is part insurance but largely social relief: partly insurance because the workers pay a part of their wages into the fund but largely social relief because the employer pays at least as much as the worker, and the state pays for the administration of the fund, and makes up an ever recurring and constantly increasing deficit in taxes. Insurance actuaries tell us that even when it most nearly approaches insurance it is never true insurance because it is not a definitely calculable risk as all insurance is and must be. True insurance rests upon the law of probability of regular recurrence of events when great numbers of these events are considered. Health insurances assumes that sickness and the cost of medical services obey these laws, and is therefore such a calculable risk. Both of these assumptions are incorrect. Too many incalculable variables constantly enter into the problem and make sickness and the cost of medical services determinable in advance." Thus says Dr. Edward H. Ochsner of Chicago in his splendid work on "Insurance and Economic Security."

WE HAVE CONSISTENTLY supported the Senate approved bill tightening up the country's food and drug laws. Because of certain of its provisions, opposition was expected, and to some extent was found, among the advertisers. It is an agreeable piece of news, published in the July 30 issue of the *New York Times*, which tells that "A matured bill that adequately protects the public" was approved before the House Interstate Commerce Subcommittee by Charles Parlin of the National Publishers' Association. Saying that he spoke for 115 agencies doing two-thirds of the country's advertising business, John Benson, President of the American Association of Advertising Agencies, New York, expressed his "heartily approval of legislation of this session to give the consumer of foods, drugs, and cosmetics more adequate protection than the present law."

Society Activities

An Address by the President of the Medical Society of the State of New York

At the opening of the New Spa Development at Saratoga Springs on July 26, 1935, Dr Frederic L. Sondern delivered an address, full text of which is printed here

* * *

As the result of careful scientific study of the local resources, and following an evaluation of what others have done in the development and use of similar gifts of nature both at home and abroad, and with the utilization of talent to create what is best and most useful to serve the desired purposes we are here today to officially open the new Spa Development of Saratoga Springs

The practical facilities are now at hand for the spa treatment of a larger number of persons under more scientifically accurate and elaborated systems of diagnosis and care than were formerly available, and for these added and refined aids in the care of the sick, the medical profession is duly appreciative

The use of spas for escape from family and business cares with wholesome entertainment for the conservation of health, and for the amelioration or cure of chronic diseases, is traditional Europeans as a class are "spa minded" Americans as a class are not yet so Baths of mineral waters dating back to Roman times are common throughout Europe

The restricted utilization of spa facilities narrowed to a service only for the ill and afflicted, makes administration relatively simple but robs the resort of one of its definite requisites, namely, an atmosphere of cheerfulness and well being Resorts of this kind are not infrequent in Europe and while probably of benefit to the patients who go there, they lack the psychological stimulus of the traditional spa, an element generally of considerable importance in most cases Such resorts are visited by relatively few, they are rather drab in appearance and lack funds to make them bright and really attractive

In order to achieve full success the spa must cater to the well person seeking temporary change with wholesome enjoyment and to those who come periodically for the purpose of conserving health as well as to the actually ailing in need of amelioration or cure The efficient management of a resort of this kind is by no means a simple

problem and the matter of administration is complex The requirements are measurably different for the various kinds of visitors, they are, in fact, conflicting in some respects and call for disciplinary control by unusual tactfulness to be satisfactorily met Such generalized use of a spa development is found in the most popular resorts of Europe, and the resulting considerable income allows correspondingly unusual expenditures for plant and structure, attractive auxiliaries for sick care as well as entertainment, most attractive landscape gardening and faultless upkeep, with excellent music and superior entertainments of various kinds Sport facilities are elaborate and attractive, and the golf, tennis, polo, and other tournaments add to the open air enjoyment

We are, however, at the moment concerned more particularly with the developments about to be put into practical use for the diagnosis and treatment of the people who come or are sent to Saratoga Springs for the benefit of their health The investigation under the auspices of the Saratoga Springs Commission reported to the Legislature in 1930, was for the purpose of making a comprehensive study and survey of the mineral springs and the establishment so far as possible of a sound scientific medical basis for their use as an aid in the cure of disease Aside from the exhaustive geological survey, this report describes American spas east of the Mississippi, and a number of the more prominent ones in Europe, and is noteworthy particularly for the conservative and sound suggestions and recommendations of the medical committee of outstanding physicians Compared with the extravagant and obviously overdrawn virtues ascribed to many a European resort, the advice was, not to attempt to exploit Saratoga as a cure all but to determine by theory and practical application just what conditions are specifically benefited and to develop facilities accordingly Such facilities are now at hand

It would be both opportune and instructive to read this entire portion of that report While time forbids this, you will allow me just a few paragraphs

The spas of Europe provide desirable and effective means for the treatment and relief of many chronic ailments The regimen at the spa

embraces, in addition to medication, diet, exercise, rest, physical therapy, suggestion, the enjoyment of music and other diversions, as well as the bathing in and drinking of mineral waters. . . .

Whatever be the physiological or biochemical action of the waters, the fact remains that the regimen at the spa, taken as a whole, exercises a beneficial effect on thousands of sufferers. Admittedly there are conditions which cannot be changed by any form of treatment, but if multitudes of patients can be even temporarily relieved a very distinct service has been rendered. It behooves the medical profession of America to take a more open-minded attitude toward balneology than has been done hitherto.

Relative to specific indications for the use of Saratoga, the same Committee expresses the feeling most conservatively that there is justification for the belief that the naturally carbonated waters such as these at Saratoga, have a physiological effect on the circulation, and that this effect in selected cases of circulatory disease is beneficial. It is their opinion that the situation and the climate of Saratoga are ideal from May to November for the treatment of certain forms of heart disease. They add that treatment at the spa should be limited to persons chronically ill, particularly patients with diseases of the circulation, for the prevention of heart failure and the building up of cardiac reserve and patients with neurasthenia, psychasthenia, or certain metabolic diseases.

The New Spa Development has in the main been specifically directed toward all the facilities for the superior care of these types of patients, and those best able to judge are well satisfied with this progress. The quoted statement in the original official report of the Committee, that so far as possible a sound scientific medical basis shall underlie the New Development has been the paramount thought in all the planning and designing of the buildings, in the selection of the equipment, in the choice of personnel, and in the adopted administrative policies. The erection of modern sanatoria and the development in them of the particular needs of such patients is a requisite still to be met.

Important and valuable as the care of these particular cases may be, and with due consideration of the fact that they exist in such numbers as to be capable of taxing even the New Development to the full, it would seem unfortunate if the use of the spa should be limited to them.

We need the facilities and the attractions of a model spa for all manner of other people who should get full value on the one hand, and on the other, contribute to its life and prosperity. Let us take a lesson from the popular spas abroad, not in absurd claims of curative value, but in offering

honest medical advice for their use in pleasing and wholesome environment. A model spa can be an ideal summer and winter playground without detracting one iota from its more serious objective. With bands, flower gardens, shaded walks, and casinos with their varied pleasures to assist in the cure, there is no more agreeable way of conquering a touch of dyspepsia or an old pain in the back when you are assured of the needed competent medical advice as well.

The well man in need of rest and a change of scene can get more of what he needs at a model spa than at his country club or hotel. His spa hotel offers a quiet night undisturbed by the screech of a radio, all night revellers or the roar and smell of motor cars. An early canter in the morning or a shaded walk and a glass or two of a mild aperient mineral water as is the custom. A short bath with massage, a little rest, a light luncheon, and a nap until the heat of the day is over, fit him splendidly for his favorite sport. Then dinner followed by an open-air concert, cinema, or theatre, according to taste. Several weeks of this routine, as varied as desired, are of far greater benefit in every way to most people than a motor trip of several hundred miles a day with all sorts of meals at odd hours, or even a sea voyage with the time consumed chiefly at meals and in the bar and the balance in a steamer chair. This wholesome holiday regimen should be inaugurated with a periodic or annual health examination, a veritable life insurance policy of which he, rather than his heirs, gets the benefit.

Others who come to the spa from time to time for the primary purpose of conserving health usually have some complaint or other which makes them "health conscious." In these people particularly, the periodic or annual health examination should precede their stay. The extraordinary facilities offered by the model spa in a fully equipped department of physiotherapy, with its various kinds of physio-hydro- and electrotherapy as well as the inhalatorio, gas baths, sun baths, and gymnasia, in addition to the mineral waters will most probably bring the relief sought during a delightful wholesome holiday and change at the same time.

For all these various activities to be successful and particularly to prevent the gaieties from disturbing the quiet restfulness and orderly procedure so essential for the more serious part of the spa cure, requires most astute planning and most efficient administration to minimize as far as possible all disturbing and undesirable elements. It is to the evolution in due course of Saratoga Springs into a model spa that I beg leave to invite your attention.

Workmen's Compensation Committee

Communication No. 7—July 26, 1935

Licensing compensation medical bureaus.—Application forms are available and some have been duly executed and forwarded either directly or through the office of the Commissioner to the local County Medical Societies.

You are advised to acknowledge receipt of those applications and to inform the established bureaus to continue as before until further notice.

Before any County Medical Society can pass upon the status of any bureau certain rules, definitions and specifications and interpretations of the law must be promulgated by the Industrial Commission.

There must be some definite distinction made between "first aid" and those stations which are established for the full provision of medical care. Minimum standards of equipment and personnel are necessary as well as specified forms indicative of the character and details of "inspection".

The law provides that the Commissioner may license bureaus upon the recommendation of the local County Medical Society. This imposes upon the local county society the necessity of making some determination of rules, etc., upon which it will determine its recommendation. As soon as this Committee has any advisory information along this line it will be passed along.

A physician who desires to operate under bureau status (one or more stations) must await the composition of the whole bureau problem.

We now advise that no action be taken on any application until such time as a general state-wide program of action can be established.

The following form letter is in use by one local County Medical Society:

DEAR SIR:

The receipt of your application is acknowledged.

When rules and regulations are formulated for the investigation, definition and authorization of compensation medical bureaus our Society Committee will then be in a position to pass on your application to operate a compensation medical bureau. In the meantime, we understand that a service, such as you maintain, may continue subject to compliance with all of the other features of Chapter 258 of the Laws of 1935.

Fee Schedule.—The work of developing this schedule is making progress, but it now seems improbable that any schedule will be promulgated by the Commissioner before early Fall. Until that time, previous rates should be in effect.

Key to Code Letters

The following is a key to code letters on Physicians' Compensation authorization cards:

X General Practice.
S Practice limited to specialty.

A General Surgery—major.
B Orthopedic Surgery.
C Traumatic Surgery—not inclusive of major or open procedures unless also qualified under A or B.
D Roentgenology (1) and/or Radiation (2).
E Ophthalmology.
F Laryngology (1), Rhinology (2), and/or Otology (3).
G Genito Urinary Diseases (Urology).
H Dermatology (1) and/or Syphilology (2).
I Neurology (1) and/or Psychiatry (2).
J Internal Medicine.
K Pathology (1), Clinical Pathology (2), Bacteriology (3), Chemistry (4), Serology (5) and/or Hematology (6).
L Gynecology (1) and/or Obstetrics (2).
M (1) Physical Therapy.
M (2) Tuberculosis and Lung Diseases.
M (3) Gastroenterology.
M (4) Cardiology.
M (5) Minor Surgery.
M (6) Anesthesia.
M (7) Plastic Surgery.
M (8) Proctology.
M (9) Neuro Surgery.
M (10) Public Health and Industrial Diseases.
M (11) Metabolic Diseases.
M (12) Immunology and Allergy.
M (13) Bronchoscopy.
M (14) Endocrinology.
M (15) Oral Surgery.
M (16) Vascular and Veno-therapy.
M (17) All others.

Where the letter alone is used it means all in a certain category. F means Laryngology, Rhinology and Otology. F 2 means Rhinology alone. F 2 and 3 means Rhinology and Otology, etc.

An X preceding the designation means that the practitioner does not devote himself exclusively to a specialty, but also does some general practice and has a certain major activity in the specialty indicated after the X. All general practitioners are labeled X; all specialists S. X means that the practitioner limits himself to those fields which he stated in his application he is qualified by training and experience to do competently. It does not circumscribe a practitioner actively within the limits of his capability as indicated in his application.

CHAS. GORDON HEYD, M.D., Chairman
DAVID J. KALISKI, M.D.
FREDERIC E. ELLIOTT, M.D.

Physicians of the British Medical Association Greeted Guests of the Medical Society of the State of New York

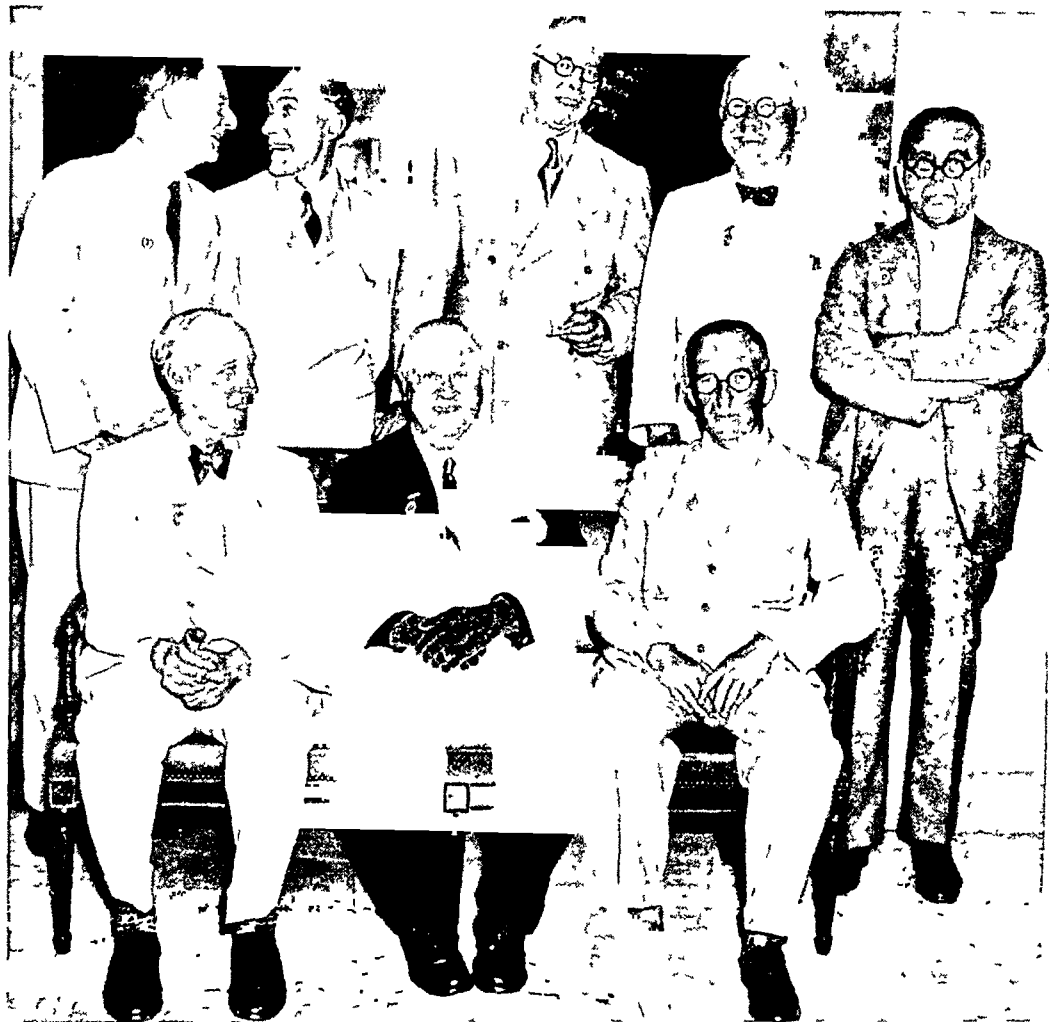


Photo by Acme

British Delegates, en route to the British Medical Association Convention in Melbourne, Australia, guests of the Medical Society of the State of New York and the American Medical Association at a luncheon held at the Waldorf-Astoria Hotel, New York City, August 5th. *Left to right*—(Seated) Prof Sir Ewen MacLean, Sir Comyns Berkeley, and Dr. G Carmichael Low (Standing) Sir Hy Gauvain, Mr. Clifford Morson, Mr. J. Bright Banister, Prof. E. W. Hey Groves, and Sir James P. Stewart.

During a two-day stay in New York, August 5-6, a delegation of British physicians and their friends were entertained by the Medical Society of the State of New York and the American Medical Association. The party was on its way to Melbourne, Australia, to attend a meeting of the British Medical Association.

The party comprised 55 physicians, 33 of whom were accompanied by members of their families. In addition, there were ten lay persons traveling in company with, or introduced by, members of the Association.

The steamer *Georgic*, on which the visitors arrived, was met down the bay by welcoming committees. The committee for the

Medical Society of the State of New York consisted of Dr. Frederic E. Sondern of New York City, President of the Society, and Dr. Arthur J. Bedell of Albany, N. Y., former President of the Society. The committee for the American Medical Association was Dr. Austin A. Hayden, Chicago, Ill., and Dr. Arthur W. Booth, Elmira, N. Y., Trustees, and Dr. Morris Fishbein, editor of the *Journal of the A.M.A.*

Sunday afternoon, August 5, the party were taken by bus to Grasslands Hospital, Valhalla, N. Y., where they were divided into small groups and shown the facilities of the hospital. Ruth Taylor, Commissioner of Welfare, Westchester County, explained



Photo by Acme

Dr. E. Kaye Le Fleming (Left) Chairman of the Council of the British Medical Association, is greeted by Dr. Frederic E. Sondern, President, Medical Society of the State of New York.



Photo by Acme

Left to right—Dr G. C. Anderson, Secretary B.M.A., and Drs Arthur W. Booth and Austin A. Hayden, Trustees A.M.A.

the place of the hospital in the scheme of county government.

One of the features of the stay of the delegation in New York was the exhilarating ride by bus to and from Grasslands, which was accomplished with special police

escort. The zooming sirens and the curving in and out of traffic in utter disregard of red lights, proved a thrill to the visitors. The trip of thirty-five miles back to New York from Valhalla was made in one hour.

Monday morning the party visited Col-



Photo by Acme

Left to right—(Seated) Dr. E. Kaye Le Fleming, Chairman of the Council, B M A , Dr. Frederic E. Sondern, President, M S S.N.Y.; and N. Bishop Harman, Treasurer, B M A (Standing) Dr. H. Guy Dain, Deputy Chairman of Representative Body, B M A ; Dr. Morris Fishbein, Editor, Journal of the American Medical Association; Dr. G. C. Anderson, Secretary, B M A ; and Dr. Arthur J. Bedell, former President of the M S S N Y

umbia University Medical Center, Cornell University Medical Center, and the New York Academy of Medicine. They were guests at noon of the Medical Society of the State of New York at a luncheon at the Waldorf-Astoria Hotel. Brief talks of welcome were made by the members of the committees officially receiving them, and a response was given by Dr. E. Kaye Le Fleming, Chairman of the Council, B.M.A.

The party entrained at midnight for Washington, en route to San Francisco, to

stop in Chicago, Grand Canyon, and Los Angeles. At San Francisco they are to be met by a similar party going by way of Canada, the combined group embarking there for Melbourne.

The Annual Conference of County Society Secretaries

The date for the meeting in Albany, previously announced incorrectly, is to be Tuesday, September tenth.

County Societies

Albany County

THE ALBANY COUNTY Medical Society is making plans for its annual clambake September 11 at Picard's Farm, New Salem. Wives and children of the members will participate in a program of entertainment.

Broome County

SOMETHING LIKE a political bombshell was set off in Binghamton in July when Dr. F. M. Dyer announced his candidacy for mayor in opposition to the slate of the regular Republican leaders. Dr. Dyer's platform calls for new and better schools, a pure water supply, bathing pools, and a larger and better City Hospital.

Chautauqua County

THE FOURTH ANNUAL interstate medical meeting under the auspices of the Chautauqua County Medical Society was held on July 24 at Chautauqua.

In addition to a distinguished scientific program, an attractive musical entertainment, golf tournament and luncheon were enjoyed. Dr. J. S. Hickman gave a large dinner at the Hotel Jamestown for Dr. M. H. Barker, of Northwestern University, who spoke at the medical meeting on the treatment of pneumonia. Dr. and Mrs. W. F. Hoover of Jamestown gave a buffet supper at their home for Dr. Walter M. Simpson, of Dayton, Ohio, president of the American Pathological Society, and for former classmates at the University of Michigan.

Erie County

THE *Buffalo Times* of July 14 devoted a page and a half of its magazine section to an interview with Dr. Thew Wright, prominent surgeon and member of the Buffalo Board of Health entitled 'Have You Had Your Appendix Out Yet?' A fine portrait of the surgeon 10 by 11 inches accompanied the article. 'If all cases of appendicitis,' he is quoted as saying, 'were operated upon during the first few hours of the attack there would be scarcely any deaths, and the serious complications from which so many die and which cause so much distress and ill health to those who recover from the acute attack, would be avoided.'

Essex County

DR. GODFREY DEWEY, of Lake Placid, was elected president of the Essex County

Tuberculosis and Public Health Association at the annual meeting. A child health program will be started in the fall.

Kings County

BROOKLYN BESTED Manhattan almost 2 to 1 in the ten week diphtheria immunization contest, staged by the Department of Health and ending June 25. Health Commissioner John L. Rice announced on July 12. In Brooklyn 14,591 children under 6 received the protective treatment and in Manhattan the total was 7,346. While these figures are 'commendable,' said Dr. Rice, 'there should have been many, many more children given this important protection in view of the fact that there were approximately 300,000 children under the age of 6 years in the two boroughs who had not been immunized when the campaign opened.'

'The figures indicate that less than one-tenth of these children were immunized in the recent drive and, in view of the fact that for the last two years diphtheria has been of a more fatal type than formerly, there certainly should have been greater interest displayed on the part of the parents in both boroughs.'

Nassau County

THE FIRST GENERAL medical center in Nassau County was dedicated on July 14. It is the recently completed \$2,000,000 Meadowbrook Hospital, which stands amid 75 acres of open land at Carmen Avenue and the Farmingdale Hempstead turnpike East Meadow, L. I. The hospital, which embraces seven buildings is a public institution and will be operated by the county. George L. Hubbell is president of the board of managers.

New York County

DR. FRANKLIN WELKER of 638 West 174th Street, president of the New York County Medical Society, who had been a general practitioner of medicine in the Washington Heights section of the city since 1896 died on July 17 at his Summer home at Highland, Ulster County, N. Y. of heart disease after an illness of two months. He was 68.

After receiving his Bachelor of Arts degree from the University of Rochester, Dr. Welker entered the Medical School of the University of Pennsylvania, where he was graduated in 1894. He served his internship in the Kings County Hospital, Brooklyn, and then opened his office in Washington

Heights. He was a former president of the Washington Heights Medical Society.

For more than twenty years Dr. Welker had been closely associated with the work of the Lutheran Hospital at Convent Avenue and 144th Street.

In his inaugural address as president of the New York County Medical Society, delivered at the New York Academy of Medicine on January 28, Dr. Welker attacked compulsory health insurance, and warned against tendencies to "standardize and regiment" medical practice, which, he said, must always be "individualistic," if high standards were to be maintained.

DR. WILLIAM HALLOCK PARK, director of the bureau of laboratories of the New York City Health Department, will receive the Roosevelt Medal for 1935, James R. Garfield, president of the Roosevelt Memorial Association, announced on July 12. The medal will be presented at a banquet at Roosevelt House, 28 East Twentieth Street, October 27, the seventy-seventh anniversary of Theodore Roosevelt's birth.

Dr. Park will receive the medal for distinguished service in administration of public office. Director of the bureau of laboratories since it was established in 1894, he has been responsible not only for scientific discoveries in the conquest of disease, but also for political innovations which made those discoveries effective for large numbers of persons.

Recently the bureau has been preparing for large-scale experiments with a new vaccine against infantile paralysis. The vaccine has been shipped in considerable quantities to North Carolina on reports of an alarming spread of the disease in that state.

Previously, Dr. Park had been associated with the fight against diphtheria, by which that scourge of childhood has been virtually eradicated from New York City. Dr. Park was the first to introduce the diphtheria antitoxin into this country and to demand of city officials that it be administered universally to school children and those of less than school age. Under his persistent efforts the death rate from diphtheria in the city has been reduced from 295 to less than 3 per 100,000. His scientific research has extended also into the field of disease carriers, and measures which protect the public against such individuals.

Oneida County

MEMBERS OF THE Oneida County Medical Society attended the annual outing at Trenton Falls on July 9. The program included a luncheon, address by President Frederic E. Sondern of the State Medical Society,

baseball and other pastimes, and a clambake. At the afternoon meeting a committee was appointed to make frequent visits to the Oneida County Hospital at Rome and report quarterly on conditions there. This action was taken following discussion of pay cases and a report of a number of complaints of treatment in that hospital.

Onondaga County

A RAID ON wildcat food and drink venders following a circus was made on July 12 by Syracuse health officers and a representative of the U. S. Public Health Service.

The drive was not directed at the legitimate concession stands within the circus grounds, but at the "gypsy" outfits which follow the circus on its rounds, much to the annoyance of the circus management.

The United States health service has been going after the "trailers" with the big circus in an effort to prevent possible cases of illness from contaminated food and refreshments served under unsanitary conditions. About a dozen stands were closed up.

Queens County

THE LIBRARY of the Queens County Medical Society was inspected by about 100 physicians and their friends at the society's building, 112-25 Queens Boulevard, Forest Hills, on July 17.

The library has more than 11,000 volumes, all on medicine, surgery and kindred subjects, "from Hippocrates to the present," according to Dr. William Beneson, chairman of the library committee, who presided over the session.

There were brief addresses by three medical society librarians, Dr. Archibald Molloch of the New York Academy of Medicine, Dr. Charles Frankenberger of the Kings County Medical Society, and Dr. Carl Boettiger of the Queens society.

Westchester County

WITH THE INCLUSION of St. Joseph's Hospital, Yonkers, in the three-cents-a-day plan for hospital care, Westchester County now has ten hospitals offering this low cost hospital service to residents, according to A. R. Williams, in charge of the Westchester Division office.

DR. HICKSON FIELD HART, of Peekskill, has been nominated for the legislature by the Republicans of the Third Assembly District. Dr. Hart, who has been practicing medicine 49 years, served as a member of the Assembly in 1931 and 1932. For many years he was president of the Peekskill Training School for Nurses.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Workmen's Compensation; Physician Injured While in Employ of Municipality

The right of a physician in the employ of a municipality to benefits under the Workmen's Compensation Law was the subject of an action passed upon by the Court of Appeals a few weeks ago.* The claimant in the case was a certain physician who was a civil service employee in the employ of the Department of Correction of the City of New York. He received an annual salary. While engaged in his duties at the City Prison in Brooklyn he undertook to incise the wound of an inmate. His scalpel slipped and cut his own left thumb. Extensive infection developed with cellulitis of the thumb, hand and forearm. Operative procedure was necessary, and the result was that postoperative scars remained on the volar and dorsal surface of the left thumb and in the interdigital space between the left thumb and index finger and on the left axilla. He suffered from a permanent defect in mobility of the thumb at the distal and proximal joints and further a defect in complete flexion of the index finger at the distal joint. The injuries were classified as 75 per cent loss of use of the thumb and 25 per cent loss of use of the index finger.

He made a claim for compensation under the Workmen's Compensation Law claiming permanent disability and claiming that he had been away from his professional duties for 15 weeks. The State Industrial Board made him an award.

No question arose as to the nature of his injuries but the City raised the question as to whether a physician employed as he was was entitled to receive compensation under the Act. The matter was finally carried to the Court of Appeals and that Court unanimously determined the matter in favor of the City.

The Workmen's Compensation Law does not in its terms specifically provide compensation for physicians in the employ of any city. Specific provision is made in the act for compensation for keepers, guards, nurses, or orderlies in a prison, reformatory, insane asylum, or hospital maintained by a municipal corporation or other subdivision of the state (Sec 3 sub 1, group 15), and Group 16 of subdivision 1 provides

compensation generally for state employees. Group 17 takes in municipal employees in the first 16 enumerated groups of the act. It was the contention of the doctor in the case that he was covered by the following language in the act:

Group 18 All other employments, except persons engaged in a clerical, teaching or non manual capacity in or for a religious, charitable, or educational institution notwithstanding the definition of employment in subdivision five or section two not hereinbefore enumerated carried on by any person, firm, or corporation in which there are engaged or employed four or more workmen or operatives regularly, in the same business or in or about the same establishment, either upon the premises or at the plant or away from the plant of the employer under any contract of hire, express or implied oral or written, except farm laborers domestic servants, other than private or domestic chauffeurs employed as such in cities of two million inhabitants or over, and persons engaged in voluntary service not under contract of hire.

The Court of Appeals in ruling against the doctor said in part:

The claimant contends that this group is applicable to municipal corporations since it applies to 'all other employments,' and the definition of 'employer' in the statute includes the state and municipalities.

The words with which group 18 above begins, namely 'all other employments' obviously restrict this phrase to employments not covered by the preceding 17 groups. The employments specified in group 18 are those carried on by 'any person, firm or corporation in which there are employed four or more workmen or operatives regularly, in the same business or in or about the same establishment either upon the premises or at the plant or away from the plant of the employer.' This is curious language by which to comprehend a municipality. The city does not, in common parlance conduct a 'business' or maintain an 'establishment' or a 'plant.'

Also in group 17 the term 'municipal corporation' was coupled with the term 'state.' This provision was reasonably and logically related to units of government, whereas the term 'corporation' as used in group 18 was employed with the terms 'person' and 'firm' so that under the familiar principle of noscitur a sociis the term 'corporation' would there relate to a private corporation.

Nor does the historical background of the legislation involved support the view of the

*Matter of Stoerzer vs The City of New York *New York Law Journal* June 26, 1935

claimant. Turning to the prior law and the evil sought to be remedied, we find the Legislature had attempted to bring within the scope of the Workmen's Compensation Law, all the employments deemed hazardous. Because of the complexity and variety of industrial activity, efforts to make the list exhaustive proved futile. Finally, in 1918, a new group, the present group 18, was added (Laws of 1918, ch. 633). Similar difficulty had not been encountered in reference to the less varied and normally less hazardous activities of municipal employees. Thus, the evil aimed at was one involving industrial employees and the remedy should not be construed to be applicable to municipal employees in the absence of language clearly bringing them within its scope (Cf. *Matter of Wilson v. Dorflinger & Sons*, 218 N. Y. 84). It is not for the courts to enlarge the application of the Compensation Act beyond the plain intention of the Legislature."

The remedy in the situation, if a remedy is needed, is one which must be sought through the Legislature.

Claimed Delay in Diagnosis of Mastoiditis

A doctor engaged in the general practice of medicine was called to attend an eight-year-old child at her home. Two years previously he had treated the same patient for an aural discharge which cleared up without operative intervention. He was told that the patient had been suffering for a week from a recurrence of this condition. Another doctor had already diagnosed the case as otitis media, with the possibility that it might develop into a mastoiditis. Examination showed that the patient had a discharge of the left ear and that the patient was complaining of pain in this ear. The child's throat was fairly red and there was a marked nasal discharge. There was nothing abnormal about her chest and abdomen, no tenderness about the mastoid, and no swelling in the posterior ear canal. The discharge was pink in color, indicating to the doctor that it was of a cerosanguineous nature. Diagnosis was otitis media with nasopharyngitis. Hot irrigations of boric acid were prescribed, drops of alcohol into the ear, and a hot water bottle. The next day there was a temperature of 101°. The pain had subsided but the discharge was still present. The doctor swabbed out the ear and applied alcohol.

Two days later the child's temperature was normal and there was no complaint of pain though the discharge was about the same. Again the doctor swabbed out the ear and at that time he instructed the mother of the child to apply boric acid applications. Four days later the patient's condition seemed to be improved, though there was

still some discharge. The child was out of bed at the time and the doctor instructed the mother to return the child to bed. The doctor was told upon the occasion of the said visit by the patient's mother that the child would be taken to a hospital some miles away the next day, to have a specialist examine and treat the ear if necessary. The next he heard of the case was when the mother brought the child into his office a few days later. The temperature was normal and there were practically no symptoms except that the discharge continued from the ear. The mother told the doctor that the patient had been taken to the hospital in question and then left the doctor's office. After that time he had no further connection with the case.

It appeared that about a week after the occasion of the said visit, the child was taken to the clinic of the hospital that had been discussed and at that time a condition of acute mastoiditis was diagnosed and an operation advised. The following day, under a general anesthesia, a simple mastoidectomy was performed and the patient remained in the hospital approximately two weeks. The patient's convalescence was uneventful. Sometime later an examination showed that the child had lack of hearing in her left ear.

A malpractice action was instituted against the general practitioner, in which the principal charge was that the defendant had been negligent in failing to diagnose that the patient was suffering from mastoiditis and that, due to the delay in the operation, the child had become deaf. The case was tried before a court and a jury and, at the conclusion of a protracted trial, the issues were submitted to the jury and a verdict was returned of no cause of action, thereby exonerating the defendant of all charges of malpractice.

Operation Upon Prostate

A man, about 61 years old, who complained of having suffered for sometime from frequency of urination, consulted a physician, who had for many years specialized in surgery. The doctor's examination of the patient showed definite evidence of a bladder obstruction caused by the median lobe of the prostate. The condition was explained to the patient and an operation recommended, to which the patient consented. A spinal anesthesia was administered to the patient and a cystoscopic examination was performed. At this time the patient was catheterized and he was found to have a considerable quantity of residual

urine in his bladder. The surgeon went up through the penis and urethral channel, with a cystoscope and loop electrode, cutting out a piece of the median lobe. There was considerable arterial oozing during the operation, though this was kept under control. Following the operation, with a large rubber catheter in place, the patient was returned to bed. Two days later examination showed no bleeding so the catheter was removed. On the third postoperative day the patient was discharged from the hospital in good condition, with instructions to return for examination a few days later.

The day after the patient arrived at his home he was unable to void and suffered a severe hemorrhage which came from the site of the operation. A neighborhood doctor was called in, who communicated with the surgeon and it was agreed between the two doctors that the case was an emergency, and, as the surgeon was unable to attend quickly at the home of the patient, the neighborhood doctor took the patient to a nearby hospital and performed a suprapubic cystotomy. The patient remained in the hospital for a month and had a long period of convalescence. Some eight months later a prostatotomy was performed.

A malpractice action was instituted against the surgeon, who was subsequently brought on for trial by jury. The principal dispute upon the trial was whether at the time the defendant discharged the patient from the hospital his urine was free from blood. However, the plaintiff failed to establish by competent proof that the defendant was in any way responsible for the long period of disability that the plaintiff underwent. At the conclusion of the plaintiff's case the court dismissed the action.

Treatment of Cut on Foot

A general practitioner was called to the home of a young man to attend him with regard to a cut on the foot which he had sustained when a glass panel in a bathroom door had broken. When the doctor arrived he found the wound bleeding profusely. Examination showed a severe laceration on the outside of the left foot, between the ankle and the Achilles tendon. The doctor thereupon washed away the blood from the surface of the wound, explored the wound

with a probe and forceps, which had been previously sterilized. He swabbed out the wound with a weak solution of lysol, after which he applied a solution composed of carbolic acid, alcohol, and camphor. After these applications the wound still continued to bleed freely and the doctor applied a suture in the upper part of the wound, leaving the lower half open for drainage. He applied a gauze bandage and told the patient to keep off his foot.

The next day the doctor returned to attend the patient and found the area around the wound somewhat reddened but found no pus. The bleeding had subsided at that time. The doctor cut the two lower stitches and swabbed out the wound with an antiseptic solution and ordered applications of boric acid wet dressings. The said treatments were continued for two days longer and at the end of that time the doctor found red lines beginning to run upward toward the knee and outward to the toes. He promptly advised hospitalization. When the patient refused to enter a hospital the doctor directed him to continue to apply wet dressings. The following day the patient's condition had not improved and a consultant was called in. The leg had begun to swell and the patient's condition was indicative of cellulitis. He became feverish. Hospitalization was again requested but the patient delayed entering a hospital for another 24 hours.

When the patient finally entered a hospital he came under the care of another doctor, who found it necessary to open the original wound and institute drainage to clear up a condition of lymphangitis, cellulitis, and general septicemia. The patient went through a difficult period of hospitalization necessary for him to be given blood transfusions and, after four months, finally recovered.

A malpractice action was instituted against the doctor, based primarily upon the claim that when the defendant was first called in he did not cleanse the wound sufficiently and that he sutured it to so great an extent that there was no proper opening for drainage. The case was tried before a judge and a jury and, at the conclusion of all the testimony put in on behalf of the plaintiff, the complaint was dismissed upon motion of the defendant.

"Doctor, I want to consult you about my stomach."

"But, madam, you are mistaken. I am a doctor of philosophy."

"Doctor of philosophy? What strange diseases there are nowadays."—*Vart Hem*, Stockholm.

"How is it," asks a writer, "that widows always seem to marry again?" It would be unkind to put forward the theory that it is because dead men tell no tales.—*Punch*.

Q. Did the wagon turn over?

A. Yes, that was one of the reasons why I got out.

Across the Desk

"NOW WE HAVE silk shirts!" exclaimed a Russian doctor to a visiting American physician. "A few years ago," he added, "we had no shirts." And he pointed proudly to his silken garment. Another Russian doctor lives in a four-room elevator apartment. He is Dr. Maschansky, the brain surgeon who performed the first successful operation for Parkinson's disease. His wife is also a physician, a pediatrician, and they have one son. The husband belongs to the Communist party, but the wife does not, so that the husband must give nine-tenths of his fees to the party, while the wife can retain her fees for herself. Perhaps that explains why the family had "ample and substantial food." Another doctor, a military surgeon, "pointed to his corporation and with pride said, 'I don't look starved. We even have plenty of caviar.'"

This is one of the reports now coming from the returning American doctors who have been visiting Russia, and we may expect many more in the coming weeks, for scores of our medical men have been taking their vacations this year in the land of Stalin. This one is from Dr. Abraham Lightstone, attending surgeon at Sydenham Hospital, New York City, and appears in the *Medical Record*. He reports that the doctors over there, however, are not so well paid as engineers, for instance, and says that about three-quarters of the medical students are women, who thus escape rigorous manual labor, while the men prefer to go in for engineering trades to get the high wages. Dr. Lightstone was invited to address the medical students in Leningrad, and told them that "if nothing interferes, there is one good reason to hope that Russian doctors should be able to do good work, as they do not waste time talking to private patients about money and bills, which are never paid anyhow." This, he reports, "was heartily applauded."

A COLLEGE PROFESSOR is getting a nice lot of publicity over his discovery that the brain works better after a light meal than after a heavy one. This amazing discovery of something every one knows was made by a series of tests on eight young men who were given their lunches in the college psychological laboratory. It should appropriately be followed by tests in other college departments. A test in the mathematics department will show that two and two make four; a test in the gym will show that the eight young men can run faster if their feet

are not tied together; a test in the physics lab will show that you can see through a ladder, and that a wink is as good as a nod to a blind horse. It will not do, however, to say that no one got any good out of the professor's experiments. The eight young men got free lunches.

NOW THE California doctors, it seems, find themselves in what is sometimes called "a pretty pickle." Every one remembers that their State Medical Society was unwise enough to vote for a scheme of state medicine. The excuse was that the Medical Society would only favor a plan completely under their own control, so it would therefore be all right. But alas for such innocence. It has no place in politics. The plan may have been harmless as first introduced into the state legislature, but the bill was soon amended beyond all recognition, and both the Assembly and the Senate, before adjournment, appointed interim committees to continue the study and present new drafts for legislation at the next session. California is famous as the happy hunting ground of "isms" of all sorts, no one can predict what lurid scheme the committees may concoct, and it is evident that the State Medical Society has started something that has got completely out of control. As another medical journal puts it, they "have a bear by the tail." It should be a warning to all other state societies.

HOSPITALS in various cities throughout the State are joining the movement for hospital insurance at 3 cents a day or some similar amount. Is there any danger in this movement? Some think so. There is danger, says one medical editor, that some hospitals may encroach on the doctor's field by performing services that properly belong in the practice of medicine. Thus the hospital "can hire technicians to take x-rays or to stain and cut and mount tissue or do blood counts, but only a licensed physician can interpret such films or reports. A technician can report a white cell count of 30,000 but he cannot say peritonitis is present; a technician can stain and mount tissue, but he cannot make a diagnosis of carcinoma. The distinction is obvious."

Is the editor of *The American Journal of Surgery* unduly alarmed? Hospital authorities may think so, but he avers flatly that "in many places hospitals are practicing medicine," and he goes on to give specific instances. In Brooklyn eleven hospitals ac-

cept obstetrical cases for a flat sum. The patient pays from \$50 to \$70 and the hospital gets the entire fee. In the same city 17 hospitals take patients for removal of tonsils and adenoids at \$15 to \$20, and five give treatments for hay fever.

Here is something that may well engage the attention of County Medical Societies. The doctor has enough chiselers working against him on every side without this thin entering wedge of competition from the hospitals, which could not continue a week without his services. The time to stop it is now, before it goes further.

DISBELIEF in the devil seems to be supported to some extent by the fact that the human race can supply plenty of devilishness without any outside assistance. In plans for the "next war," which seems expected before long in Europe, preparations are being openly made not to "raise hell" from regions below, but to run it from the skies above on men, women, and little children indiscriminately. London fully expects infernal showers of mustard gas, which burns the lungs, eyes, skin, or any part of the body it touches. Not merely a mask, therefore, but a covering for the entire body will be needed. Londoners are being advised to have upper rooms ready, to be closely sealed with mud or other insulation where families can take refuge till the gas clears away. No confidence is felt that any treaties or pledges not to use gas will be observed. Plans are under consideration also to build large underground refuges, bomb proof and gas proof, where the populace may run for shelter in air raids.

Nor are we so safe, either, as we perhaps fondly imagine. True, hostile planes cannot yet fly the Atlantic with a ton of bombs and fuel for the round trip, but swift airplane carriers can bring them to our very coasts and supply them with all the bombs and fuel required. Cities hundreds of miles inland can be bombed as easily as London. The medical side of this diabolical form of warfare, then, is of importance to our own physicians as well as to those of the quarrelsome European nations from which our forefathers came in search of peace and quiet.

The other side of the picture appears in the fact that airplane defense has kept pace with airplane attack, and the infernal fliers may find themselves in an infernal mess long before they ever reach their objectives. As Smith said, when he was being luridly threatened by Brown—"and what would I be doing?"

READERS ARE of three kinds: remarks an

observant writer in a dental magazine—the "duck-back" reader, the "sieve" reader, and the "sponge" reader. The duck backs form by far the largest group, according to Dr. Irwin W. Scopp in *The Dental Outlook*. They read everything and remember nothing. The sieves, on the other hand, remember an enormous amount of irrelevant detail; they are walking encyclopedias of useless information; in short, they are windbags. Their false show of erudition may land them in college faculties, in high office in professional societies, or among the highly paid specialists, but for all that they are sieves. The sponge reader "is the stuff that scholars are made of," he is open-minded, objective, scientific, and reflective; he is not noisy, hasty, or fickle. To him, reading is a means to an end, not the end itself. It appears, finally, according to Dr. Scopp, that "he does not read too many articles, but those that he does read are a few good ones," so the disquieting thought arises that our marvelous and superlative sponge readers may not be reading these lines at all.

A DELICIOUS SUGGESTION comes from Oregon. "It is the best of its kind we have seen in many moons!" exclaims a medical editor in Denver who passes it on to us. A colossal new Foundation, of many million dollars, is satirically suggested by a member of the Committee of Publicity of the Oregon State Medical Society, to study "two grave problems," much graver than lack of medical care. They are namely, "exposure and under nutrition." The study will result, we are assured in the enactment of "compulsory clothing and food insurance laws," to supply cheaper food and raiment. Under these laws, "the Rosenwalds and the Filenes will be compelled to discontinue the manufacture or sale of good clothing, Mr. Milbank will have to supply a cheaper and poorer grade of milk." Panel systems as in England would be set up, and the Rosenwalds, Filenes, and Milbanks, working at top speed, might earn \$2,000 a year, like the physicians in Europe under socialized medicine, as favored here by these "philanthropists." In short, how would these millionaire advocates of compulsory health insurance like to take some of their own medicine? It is a fair question. What is their answer?

WE READ of a customer who ordered bloodshot artificial eye to match the other on "mornings after." The banker whose glass eye was the one with a kindly look in it should have had a steely "spare" for banking hours.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

The Romance of Exploration and Emergency First-Aid from Stanley to Byrd.—Duodecimo of 160 pages, illustrated. New York, Burroughs Wellcome & Co. 1935.

Les Hallucinations Verbales et la Parole.—By Daniel Lagache, M.D. Duodecimo of 184 pages. Paris, Félix Alcan. 1934. Paper, 18 fr.

Ideal Health or the Laws of Life and Health.—By Alexander Bryce, M.D. Third edition. Duodecimo of 340 pages, illustrated. Baltimore, William Wood & Company. 1935. Cloth, \$2.00.

Orthopedics for the Teachers of Crippled Children.—By Samuel W. Boorstein, M.D. Duodecimo of 120 pages. New York, Aidem Publishing Company. 1935. Cloth, \$1.50.

Diseases of the Rectum and Colon and Their Surgical Treatment.—By J. P. Lockhart-Mummery, F. R. C. S. Eng. Second edition. Octavo of 605 pages, illustrated. Baltimore, Williams & Wilkins Company, 1934. Cloth, \$10.00.

General Ophthalmology: A Short Treatise for Students and Practitioners.—By S. A. Agatston, M.D., 16mo. of 170 pages. New York, John L. Schoenfeld Company. 1935. Cloth, \$2.00.

Doctors and Juries.—By Humphreys Springstun. Duodecimo of 155 pages. Philadelphia, P. Blakiston's Son & Company. 1935. Cloth, \$2.00.

The Modern Method of Birth Control.—By Thurston S. Welton, M.D. Duodecimo of 168 pages, illustrated. New York, Walter J. Black, Inc. 1935. Cloth, \$3.00.

Diseases of the Heart.—By John Cowan, M.D., and W. T. Ritchie, M.D. Third edition. Octavo of 631 pages, illustrated. Baltimore, William Wood & Company. 1935. Cloth, \$9.00.

Failure of the Circulation.—By Tinsley R. Harrison, M.D. Octavo of 396 pages, illustrated. Baltimore, Williams & Wilkins Company. 1935. Cloth, \$4.50.

The Harvey Lectures.—Delivered under the Auspices of the Harvey Society of New York, 1933-34. Under the Patronage of the New York Academy of Medicine. By Dr. R. E. Dyer and others. Series 29. Octavo of 262 pages, illustrated. Baltimore, Williams & Wilkins Company. 1935. Cloth, \$4.00.

Wish and Wisdom.—By Joseph Jastrow. Octavo of 394 pages, illustrated. New York, D. Appleton-Century Company. 1935. Cloth, \$3.50.

A Textbook of Biochemistry.—By Benjamin Harrow, Ph.D., and Carl P. Sherwin, M.D. Octavo of 797 pages, illustrated. Philadelphia, W. B. Saunders Company. 1935. Cloth, \$6.00.

Anaesthesia and Analgesia in Labour.—By Katharine G. Lloyd-Williams, M.D. Duodecimo of 96 pages, illustrated. Baltimore, William Wood & Company. 1934. Cloth, \$2.00.

The Treatment of Common Female Ailments.—By Frederick J. McCann, M.D. Third edition. Octavo of 379 pages. Baltimore, William Wood & Company. 1934. Cloth, \$4.75.

REVIEWED

Physical Defects—The Pathway to Correction. A study of physical defects among school children in New York City. By the Research Division of the American Child Health Association. Octavo of 171 pages. New York, American Child Health Association, 1934.

The effect of reading this book on this examiner is to wonder whether our school health system is as bad as it sounds. The reviewer suspects not, yet the book does give the impression that actual defects bear not too intimate a relation to those reported, and that, those reported are too frequently not relieved. The exception is tonsils. Of 1,000 at the age of 11, 610 have been removed and "only 65 out of 1,000 eleven-year-olds would escape recommendation for tonsil removal, with four successive examinations such as the ordinary school

examination." Exactly 93½ per cent were advised to have their tonsils out!

To this reviewer the best means of improving the situation, which is now being urged in and out of the Department, receives too little attention, placing the responsibility on the private practitioner.

It is a stimulating criticism.

W. D. LUDLUM

Healthy Babies Are Happy Babies. A Complete Handbook for Modern Mothers. By Josephine H. Kenyon, M.D. Duodecimo of 320 pages. Boston, Little Brown & Company, 1934. Cloth, \$1.50.

This is a practical, up-to-date handbook on the physical and mental training of children up to the age of three years. The book is written in a popular vein by an eminent pediatrician of New York City,

who has also the valuable experience of motherhood.

The author has condensed a subject of tremendous magnitude—namely that of child development and parental education—into a small, usable volume by picking out the most essential information and facts for mothers of this generation. Prices and places of purchase of clothing and equipment are mentioned as well as many labor and time-saving devices. A chapter on emergencies is included.

Mothers will find this little book valuable and readable for answers to child-rearing problems.

SAMUEL ZWERLING

The Biology of the Individual. An Investigation of the Most Recent Advances. Vol. XIV of a Series of Research Publications of the Association for Research in Nervous and Mental Disease. Octavo of 323 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1934. Cloth, \$6.00.

The papers contained in this volume of the Association were given at the December, 1933, meeting and contain contributions from many fields of research not immediately connected with neurology or psychiatry. The general trend of the collection covers the physical basis of individual development, the concept of constitution in psychiatry, and the various clinical and psychological methods of studying the individual personality in the light of types. On the whole, the papers represent surveys to a greater degree than previous collections of the Association, so that much of the material may have been seen in the literature. Some of the contributions are notable, however, for their appearance in a neuropsychiatric symposium and serve very well to illustrate the present status of the biological orientation of neuropsychiatry.

The introductory historical remarks of Jelliffe are a brilliant example of that stimulating contributor's versatility. Davenport reveals how bodily form is inheritable and thus forms a foundation for personality. The anatomist Todd presented a progressive study of the close relation between skeletal development and intellectual advance. Gesell, Timme, and Goldzieher reviewed the work for which they are known. Kahn broached the concept of constitution in psychiatry. Klüver, Schilder, and Diethelm discussed eidetic psychology, psychoanalysis and the Rohrschach test as methods in personality study. Allport analyzed the effect of social institutions on individual conflicts. There are also papers on crime and the individual as well as studies in personality factors in the psychoses.

SAM PARKER

The Heart Visible. A Clinical Study in Cardiovascular Roentgenology in Health & Disease.—By J. Polevski, M.D. Octavo of 207 pages, illustrated. Philadelphia, F. A. Davis Company, 1934. Cloth, \$5.00.

This is an excellent work on fluoroscopy of the heart, concise and to the point; moreover the illustrations and diagrams are excellent. There are many very interesting facts, clinical as well as roentgenological, which make this volume very desirable. Chapter I, "General Considerations"; Chapter II, "Methods of Roentgenologic Study of the Heart"; and Chapter XII, "The Pericardium," are of extreme interest.

While in his preface the author states that this volume is intended especially "for the roentgenologist who has the scientific curiosity of a clinician," the reviewer believes that it has as great an appeal to general internists, to internists interested particularly in the clinical phases of cardiovascular disease, as to all general practitioners.

There is a decided need for this work.

CHARLES SHOOKHOFF

Seeing and Human Welfare. By Matthew Luckiesh, D.Sc. Baltimore, Williams & Wilkins Company, 1934. Duodecimo of 193 pages, illustrated. Cloth, \$2.50.

This interesting little volume is obviously an effort of the author to popularize the results of his studies as presented in numerous volumes during the past ten years. And he is a master at this sort of presentation.

It is not strange that the work deals with various aspects of lighting and its relation to health and vision when we recall that Mr. Luckiesh is Director of the Lighting Research Laboratory of the General Electric Company. The reviewer does not mean to imply any lack of sincerity because of this relation, however. The Seeing Machine, The Science of Seeing, Visibility of Objects, and Light and Lighting are the headings of representative chapters. The average patient wants definite instruction as regards the relation of his eyes to the illumination of his work or amusements. This book is a rather successful effort to supply him with the answers to his questions. As far as the reviewer knows, this is the only work directed to such an end.

The book could be unqualifiedly recommended if it were not that the writer has given his own researches a more prominent place in the problem than ophthalmic and engineering opinion are likely to accept at this time. The work also further exaggerates the futile attempt of the past generation to regard the eye as a separate and detached instrument instead of an integral

interacting part of the organism which it serves. After all, the eye is not an optical device; it is a biological structure with certain optical properties. These criticisms are, however, of minor significance as compared with the great mass of very acceptable material and suggestions which the author presents in a clear and direct manner. The ophthalmologist should read this volume as a supplement to the more technical works by the same pen. He can recommend it to those of his patients who are of an inquiring turn of mind.

JOHN N. EVANS

Food for the Diabetic. By Mary Pascoe Huddleson. Third Revised Edition. Duodecimo of 110 pages illustrated. New York, Macmillan Co., 1934. Cloth, \$1.50.

Mrs. Huddleson's new edition, in its simple style so that the average patient might easily understand its contents, is a valuable book of dietetic instruction and guidance for the diabetic patient.

Since the cornerstone of all methods of treatment of the diabetic is the diet, this small but thorough volume will be found an indispensable adjunct to the physician's instructions.

For such patients as have diabetes the clear understanding of their diet gives them the very best prospect of being able to live in comfort in spite of their disease. Their diet must not only be sufficient in amount but it also must be properly apportioned as regards the balance between carbohydrates, protein, and fat. Without careful management of the diet the full effectiveness of insulin cannot possibly be attained.

The physician may supply a carefully worked out accurate diet-formula for his patient but how much freedom in choice of foods the patient has is directly proportional to his knowledge of *Food for the Diabetic*.

No matter how mild the diabetic syndrome may be, it must be adequately controlled. The reward for patience, persistence and study of *Food for the Diabetic* is freedom from diabetic complications, and a state of well-being equal to that of the non-diabetic.

S. G. SLO-BODKIN

Handedness—Right and Left. By Ira S. Wile, M.D. Octavo of 439 pages. Boston, Lothrop, Lee & Shepard Company, 1934. Cloth, \$2.75.

In recent years the relation of the handedness of the individual to his mental and psychological development has been increasingly studied. In this work the author has collected together in great detail a consideration of biologic and social factors which

have entered into the question of handedness. While it is fair to assume that preferential right-handedness exists because society has found it to be of distinct value, yet what of the individual who is left-handed? Has he the right to be left-handed? Is he anti-social on a physical level? Are there survival values in ambidexterity? These are some of the questions which the author attempts to solve.

In the study of primitive man, it is revealed that he was ambidexterous, but that during the Bronze Age the tendency towards right-handedness developed. Various examples indicate that through ancient times the right hand has been used to represent power, virtue, and life, whereas the left hand has indicated weakness, evil, and death.

Various statistical surveys have been made to indicate hand preferences. While most data gives a lowered percentage of sinistrals the author believes that approximately 25 per cent covers this group. The causation of a dominance in right-handedness is founded upon more than convention and custom. It exists prior to birth, hence it must be structural and organic. Evidence is cumulative that left-handedness like right-handedness is inheritable and only thus explicable. Handedness is also closely related to cerebral dominance. The author's own ideas of handedness and eyedness lean towards such natural forces as solar motion and rotation of the earth. There are chapters relating to the luck idea and hand preference, magic and hand values, and religion and hand symbolism. In his conclusions, the author states that generally speaking right-handed activities are called for. Actual difficulties arise among the natural sinistrals. Many behavior difficulties give evidence of their direct relation to left-handedness. There are problems concerned with correlating dominance with the left eye and left hand. Other difficulties need to be solved such as poor muscular co-ordination, slow speech, stammering, stuttering, mirror writing, and reading disabilities. There are other problems of conversion of handedness which are particularly related to the field of education and personality development.

This work gives evidence of thorough preparation. There is an extensive bibliography as well as an index of subjects. It should be of inestimable value to the profession and particularly to those physicians interested in the general problems of human behavior.

STANLEY S. LAMM

PRIMARY CARCINOMA OF THE LUNGLEWIS FOX FRISSELL, M.D., *New York City*

While infrequently mentioned in earlier medical literature, primary carcinoma of the lung is really hoary with age and is described by Agricola¹ in the sixteenth century. Laennec² and Stokes³ described it clinically in 1819 and 1837, respectively, while to Virchow⁴ we owe our modern pathological concept of this disease. Adler⁵ in 1911 states "The failure of recognition of cancer of the lung has for a long time perpetuated the dogma of its rarity." For the past three decades reports, both clinical and pathological, have been increasingly numerous, all showing an increase. Our own tables show an increase from a percentage of 2.22 of cancer of the lung to total cancer in the first four years of the century to 7.06 in the last four year period. Whether this increase be real or apparent is open to debate. First, pathologically, many tumors classified as sarcomata by pathologists of the last century are now included as epithelial tumors of the so called oatcell variety. Second, carcinoma of the lung, when found, was usually considered metastatic, this resting on the statement of no less an authority than Virchow,⁴ who stated that organs in which epithelial tumors metastasized were rarely the seats of primary carcinoma. Third, the widespread interest of pathologists in this subject, particularly in the last decade, has led to the discovery of a considerable number of pulmonary lesions with larger metastases. The metastases of similar cases in earlier reports were probably considered the primary lesions. Clinically, there is no question that our newer methods of investigation, x ray, bronchoscope, lipiodol, and so on, have led to frequent ante-mortem diag-

noses, whereas in the early literature the diagnoses are almost exclusively post-mortem. During this same period, external and readily diagnosed cancer has not increased, so that in spite of the post-mortem evidence of the figures of bronchial carcinoma, especially in Germany for the last two decades, it would seem probable that this increase is apparent, rather than real.

Etiology

Etiologically, carcinoma of the lung must be dependent in general on the same causes as carcinoma elsewhere. In common with all cancer, many theories have been advanced to account for its origin. All authors emphasize irritation of the bronchial mucous membrane as one of the underlying causes and Menetrier⁶ states "In reality, inflammatory metaplasias dominate the whole history of cancer of the lung." Winternitz⁷ stresses influenza as a factor in the causation of bronchial carcinoma and actually prophesied in 1920 that owing to the "metaplasia of the bronchial epithelium causing a proliferation of the young cells, difficult to distinguish from neoplasm, a probable increase in primary carcinoma would occur later." War gas has been stressed, particularly by German authors. Ewing⁸ believes that tuberculosis is the common pre cancerous irritant.

Rostoksi and Saupe⁹ in 1926 and Pirchan and Siki¹⁰ in 1932 proved the *bergkrankheit* of the Schneeberg and Joachimstal miners to be primary pulmonary carcinoma, with a death rate in the mining population of 62 per cent in the Schneeberg and 53 per cent in the Joachimstal. It was at this latter place

that Madame Curie isolated radium. The latter authors suggested radio-active dust as the etiological factor. As control research in other mining groups found no abnormal incidence of pulmonary carcinoma, the suggestion of radium or radio-active dust as the offending agent is extremely plausible.

Pathology

The histogenesis of carcinoma of the lung is usually described as derived from the columnar, the mucus cells of the bronchi, or the alveolar cells, though Fried¹¹ maintains that all regeneration is from the basal cell which is still undifferentiated and that malignant change never occurs in the fully differentiated cell type, such as the cylindrical and mucus cells of the bronchial epithelium. Furthermore, he believes that, as the alveolar epithelium is embryologically derived from the mesoderm, a true epithelial tumor could not arise from the alveolar cell (cit. Rose of Oertel's laboratory). Huguenin,¹² on the contrary, states that the bronchial type of tumor in 46 cases collected from the Hopitaux de Paris is relatively rare. From the evidence of our own series, we believe that at least two of our cases show distinct histological evidence of derivation from the alveolar epithelium.

The observations of this paper are founded on a series of 38 cases from the service at St. Luke's Hospital from 1900 to 1935, of which 30 were autopsied. The other cases were pathologically proven, either by operation, bronchoscopic section or biopsy. In addition, but not specifically reported, are at least double the number which have been diagnosed as being primary carcinoma of the lung, either by clinical, bronchoscopic or x-ray evidence, but not proven by section. These, however, in compiling our data, have not been used, except in formulating our own impressions of the clinical course of the disease.

The onset of the disease is sometimes exceedingly insidious, particularly in the Schneeberg group. This, however, is less marked in our series of 38 cases in which in only 14 cases could a history be elicited of over one year, though of these, 5 had had a cough or asthma for years, in one case for 20. It cannot, of

course, be determined whether these prolonged histories, many of them asthmatic, had had a true asthma or whether these symptoms were due, part of the time at least, to cancer or pre-cancerous irritation of the bronchi.

The ages of our patients ranged from 17 to 69. Ten were females, 28 males. Their occupations were not significant. None were miners, and but 3 had dusty trades; respectively, bricklayer, baker, and fireman. Neither were their habits of significance.

Symptoms

As might be expected, the symptoms of bronchial carcinoma are protean in character, depending on the exact situation and stage of the lesion in question. If located in the primary bronchi, it will cause cough, as in G. P. of our series, and often hemoptysis, or if in the lung tissue centrally located, it may give absolutely no pulmonary symptoms, as in the case of G. R. W., who complained only of a progressive osteoarthropathy. Again, the first symptom may be due to a metastasis anywhere in the body, as in S. W. with a metastatic carcinoma of the tibia; C. S. with a metastatic carcinoma of the liver; F. with a brain metastasis; A. R. with an esophageal obstruction; or with symptoms due to variously located metastases and few, if any, directed to the organ primarily diseased.

Due to the lung lesion itself, the symptoms may be very diverse, depending on the type of pathological process present. The two most constant symptoms are cough and pain. The cough, present in 91 per cent and first symptom in 18.4 per cent, at first of the irritative variety, gradually becomes more constant, and is accompanied by sputum, at first of glairy mucus, then mucopurulent and finally, purulent; or with abscess formation foul and fetid. On the other hand, lung lesions centrally located, as in G. P. W., may give rise to no cough whatever.

Pain shares with cough the distinction of being the first and most common symptom. In 21.06 per cent of our cases it was the first symptom and present in 73.9 per cent of 38 cases. It is often at first a vague sense of boring and oppression in any part of the thoracic cavity, at times unrelated to the location of the

tumor and very similar to the symptom *norgeln*, described among the Erzgebirge miners. Later it may be more intense, sometimes excruciating, and with the advent of pleurisy assumes a pleuritic character.

Asthmatic breathing was the first symptom in 10.8 per cent and is a common complaint caused by a slight or greater degree of bronchial occlusion.

Dyspnea, apart from asthma, may be caused by either replacement of a large part of the lung parenchyma by tumor masses, or by tumors of miliary distribution, as in J. W., in whom it was the first symptom, or more commonly by pleural effusion, atelectasis of the lung or pressure by mediastinal metastases in the lymph nodes of this locality on the brachæa, bronchus, or heart.

Loss of weight and strength, usually a later symptom, are the first symptoms noted in 10.8 per cent of our cases. Osteoarthropathy was a first symptom in one of our cases and present in 5. Fever is found in 44.7 per cent of our cases and is, of course, present in all cases with abscess formation or secondary inflammation, but is also a relatively common symptom in most cases at some stage of the disease, even in the absence of evidence of inflammation. The nature of its causation is obscure, where not dependent on inflammation, but it is to be noted that it is present also in primary carcinoma of the liver in a considerable proportion of cases.

Hemoptysis is often an early symptom and is sometimes frequently repeated. It occurred in 36.8 per cent of our cases. We have seen nothing distinctive or characteristic about it and have failed to observe the so-called "currant jelly" type.

Physical signs of bronchial carcinoma are likewise protean, varying from no signs at all in the early stage to the few rôles of localized bronchitis and an x-ray picture of slight peribronchial infiltration after a few months. In the latter stages of the disease dullness, bronchial voice, bronchial or diminished breath sounds due to the tumor mass or to atelectasis of either a lobe or the whole lung with displacement of mediastinum and diaphragm, occur.

Abscess formation or pleurisy with effusion also mask the physical signs.

The discrete isolated pulmonary tumor may give no physical signs or slight dullness and diminished breathing, with a characteristic x-ray picture, in which case the differential diagnosis must be made between the malignant or benign tumor or cyst.

The two most helpful adjuvants are x-ray and bronchoscopy.

The former presents, according to the stage of the disease, no shadow, a picture of peribronchial infiltration extending from the hilus in early cases of carcinoma, a dense shadow involving the lobe in a scirrhus type of case, or an advancing atelectasis, sometimes involving the whole lung when both main stem bronchi are involved. A dense opacity due to fluid, discrete circumscribed shadows of the isolated lesion or innumerable small shadows resembling tuberculosis of the miliary type, are other variants.

Bronchoscopy: This method is most reliable as the majority of cases of carcinoma of the lung are of the bronchial type, often situated near the opening of the main stem bronchi, and accessible not only to direct inspection but for the removal of a section for pathological examination. Where the lesion is lower down the bronchial tree, of course, this type of examination would give no information. It is also negative in case of discrete tumors within the lung and such cases as arise from the alveolar epithelium. The injection of iodized oil (lipiodol) is much stressed, particularly by French observers, who stress the fact that the oil surrounds the shadow but does not penetrate it.

Differential Diagnosis

The differential diagnosis of carcinoma of the lung is difficult and always a matter of the exclusion of the more common pulmonary conditions. In the early stage before the development of physical signs, it is well to remember the dictum of Moses¹³: "When a cough persists without obvious cause, accompanied by other minor thoracic symptoms or loss of weight, one must think of carcinoma of the lung," and it is here that bronchoscopy may lead to an early diagnosis. X-rays should also be taken at frequent intervals and may reveal the infiltration due to a beginning bronchial tumor.

Tuberculosis is perhaps the disease with which bronchial cancer is most often confused in an early stage. The cough, loss of weight, x-ray appearance of peribronchial infiltration, hemoptysis, all present a similar appearance, but lesser liability to fever, absence of tubercle bacilli in the sputum, are helpful in making a diagnosis; but here too bronchoscopy is our main reliance.

Unfortunately, in ward services, such early cases rarely present themselves and our main problem is to distinguish the more advanced lesions from other pulmonary conditions. In our series, 6 cases have been diagnosed and treated as abscess of the lung, the underlying carcinoma remaining undiagnosed until autopsy. Such cases, of course, have the fever, foul sputum and all other signs of pulmonary abscess and are indistinguishable by x-ray or physical examination. A longer pulmonary history, the absence of an acute onset following pneumonia or throat operation, may arouse the suspicions of the true pathological condition, but the mistake can nevertheless be often made.

The presence of a small primary lung lesion with a much larger metastasis as in the liver, may frequently lead to a false diagnosis. Or brain metastasis with cerebral symptoms, may confuse the clinical picture and completely mask the pulmonary lesion. Mediastinal neoplasm, as lymphosarcoma or Hodgkin's disease, may be indistinguishable from a bronchial carcinoma with mediastinal metastasis. The true diagnosis may frequently be made here by bronchoscopic examination.

Cases involving the pleura will also mask the picture by giving the clinical appearance of a pleurisy. The fluid often is bloody and sometimes tumor cells may be demonstrated. Benign neoplasms and cysts of the lung at times can cause false diagnosis. These shadows are usually more discrete, though in one of our cases a post-mortem disclosed a perfectly discrete malignant neoplasm of an alveolar type.

Treatment

Until recently, the outlook was absolutely fatal, but with the introduction of the bronchoscope, a number of cases have been reported of the removal of the

growth without recurrence. Lobectomy or even pneumonectomy has been successfully performed for other pulmonary conditions, such as bronchiectasis, abscess, and so on, and a number of such operations have been performed for carcinoma of the lung, though I know of none reported in which the cure has lasted up to the five-year period. We have one such case recently operated on for a bronchiogenic tumor in the right upper lobe, which has survived operation and is doing well, though we fear that the growth by invasion of mediastinum and pleura is beyond the operative field. Two other earlier attempts at the removal of discrete tumors proved rapidly fatal.

Palliative

Deep radiation by x-ray or radium has proved disappointing in our series, though some have shown temporary amelioration of pressure symptoms and some regression of the x-ray shadow. For cases of intractable and severe pain, the operation of cordotomy (spinothalamic section) (compare S. C. of our series) offers relief, if the lesion be low enough to cut the tract above the region of involvement. For the remainder, supportive treatment and morphine are all that can be offered.

Prognosis

The outlook is still extremely bad, though a few early cases may be cured by bronchoscopic removal. We have recently seen a case with an advanced shadow close to the mediastinum, in which we had considered surgery 9 months earlier and rejected it because of our belief that mediastinal metastasis existed. An autopsy 9 months later showed the mediastinum free. Certainly, our advice should be less conservative and operation, both for diagnosis and radical extirpation, much more frequently considered.

With the advance in thoracic surgery, we may hope in the future that better results from radical surgery may be obtained. As clinicians, our part should be to make as early a diagnosis as possible of this condition, so hopeless if diagnosed late.

Following are abstracts of 8 illustrative case histories.

CASE 1. M. D. A., was admitted March 3, 1930, discharged April 29, 1930, and later readmitted.

Bronchiogenic carcinoma proven by bronchoscopic section. Onset: pressure in lungs. Cough and hemoptysis a few months later. Physical examination: dullness of upper mediastinum. Impression: Mediastinal tumor. Readmission six months later, with a very severe chest pain. Had extensive x-ray therapy. Was discharged to radiotherapy clinic. Date of death unknown.

CASE 2. S. C., hospital No. 108-440, was admitted November 14, 1934, and died March 5, 1935.

A case of bronchiogenic carcinoma of the left upper lobe, intractable left-sided pain, finally relieved by cordotomy. Bronchoscopic negative. Onset: slight cough many years, pain coming on seven months before admission. Spinothalamic section by Dr. Stookey. Clinical diagnosis: Primary carcinoma left upper lobe. Autopsy: Bronchiogenic squamous carcinoma left upper lobe.

CASE 3. A. C. had bronchiogenic cancer in which pneumonectomy was done by Drs. Lyle and Ada. One year's history of severe pain in right shoulder, following a respiratory infection (?). Free from symptoms until five weeks before admission when she again caught cold; persistent dry cough since; no expectoration or loss of weight. Physical: dullness outer one-third first and second right spaces, diminished breath sounds; no râles. Bronchoscopy negative. Preliminary pneumothorax, followed by complete pneumonectomy. Pathological examination: Bronchiogenic carcinoma.

CASE 4. J. W., hospital No. 86465, was admitted June 1, 1934, and died June 13, 1931.

Case of miliary carcinomatosis of the lung. Cough for years, with scanty sputum; loss of weight 6 months; dyspnea nine weeks. Physical: Diminished resonance, feeble breath sounds, medium dry râles over entire chest. No fever or positive evidence of tuberculosis. No evidence of malignant disease elsewhere. Biopsy on cervical glands: cancer of adenomatous type. Clinical diagnosis: carcinomatosis of lung, probably secondary. Post-mortem: 60 per cent of the parenchyma volume obliterated by tumor growth which consisted of minute whitish nodules each about the size of a pinhead. No cancer elsewhere. Microscopic diagnosis: carcinoma of lung, alveolar in origin.

CASE 5. C. R. W., hospital No. 93429,

was admitted April 24, 1932, and died July 25, 1932.

A case of discrete pulmonary tumor without respiratory symptoms. Complained of osteoarthritis. Physical: markedly clubbed fingers, enlargement of the radius and ulna both arms. Physical of chest showed only a very slight diminution of breathing in right interscapular region. Sella turcica negative. X-ray showed discrete tumor of lung. Clinical impression: glandular disturbance with a benign pulmonary lesion. No response to x-ray. Operation: a portion of tumor removed. Pathologically, carcinoma, bronchiogenic.

CASE 6. G. W., was admitted February 7, 1934, and died February 12, 1934.

Carcinoma of the lung, clinical diagnosis abscess of lung. Surgically treated. Cancer undiagnosed until post-mortem. One year's history of respiratory infection, fever. Physical examination: dullness lower half left chest, tympany above. X-ray shows free fluid, exploration found pus. Operation: thoracotomy with rib resection drainage. Post-mortem: Bronchiogenic carcinoma of lung. Necrosis of tumor causing abscess.

CASE 7. L. W., hospital No. 103-384, was admitted November 13, 1933, and died February 16, 1934.

Case showing Horner's syndrome and symptoms of upper sulcus tumor as described by Pancoast. Pain and weakness in right arm one year, with no respiratory symptoms. Myosis of right pupil with narrowing of right palpebral fissure; supraclavicular glands large and hard. Lung shows right apex dull, with diminished breath sounds. Hyperesthesia entire anterior surface right forearm. Clinical impression was of superior sulcus tumor until corrected by biopsy of cervical gland. X-ray gave no relief to pain. Cordotomy refused. Was discharged. Readmitted two months later with history of cough ten days. Post-mortem shows primary carcinoma of the lung from mucus glands of bronchi.

CASE 8. F. C. P., was first seen November 2, 1929. This case, not pathologically proven, mediastinal tumor, probably bronchiogenic in origin, shown because it best illustrates atelectasis of the lung. History of chronic cough for years. When first seen was afebrile, with numerous râles through chest, especially on the right. Clinical impression: chronic bronchitis and asthma. X-ray of chest made later showed mass in mediastinum, believed to be tumor. Diagnosis of carcinoma made; bronchoscopy not done. For a month ran a little fever; bloody expectoration in two months.

time, during which he received intensive x-ray therapy without improvement. On January 8, dullness over upper lobe. The plate showed shadow which we believed to be beginning atelectasis, complete of right upper lobe by the middle of January.

Trachea displaced to the left and diaphragm elevated on the right. By the 20th there was no excursion to right side of chest, flatness and diminished breath sounds over all. Complete atelectasis.

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References

1. Agricola, Gregorius: *De Re Metallica*, Basileae (Basle), 1556, p. 272.
2. Laennec, R. T. H.: *L'Auscultation Mediate*, Rene Theophile Hyacinth, 1819.
3. Stokes, W.: *Diseases of the Chest*, London, 1837.
4. Virchow, R.: *Die krankhaften Geschwulste*, Berlin, 1863.
5. Adler, J.: Longmans, Green, N. Y., 1912; D. Appleton & Co., N. Y., 1920.
6. Menetrier, M. P.: Cancer. *Nouveau Traité de medecin*, Brouardel-Gilbert-Carnot. Paris, Bailliere, 1926, vol. 13, p. 672.
7. Winternitz, M. C., Wason, J. M. and McNamara, F. P.: *The Pathology of Influenza*, New Haven, Yale University Press, 1920.
8. Ewing, James: *Neoplastic Diseases*. Ed. 3. Philadelphia, W. B. Saunders, 1928, p. 851.
9. Rostoski and Saupe: Die Bergkrankheit der Erzbergleute in Schneeberg in Sachsen (Schneeberger Lungenkrebs), *Zeits. f. Krebsforschung* No. 23, 1926.
10. Pirchan and Siki: Cancer of the Lung in the Miners of Jachymov (Joachimsthal), *Amer. Journal of Cancer*, July, 1932.
11. Fried, B. M.: *Primary Carcinoma of the Lung*, Williams & Wilkins Co., Baltimore, 1932.
12. Huguenin, René: Le cancer primitif du poumon, *Étude Anatomique Clinique*. Masson & Co., Paris, 1928.
13. Moses: Primary Carcinoma of the Lung, *Amer. J. Med. Sci.*, 1925: 170, 102.

Discussion

DR. LEILA CHARLTON KNOX, *New York*—Primary carcinoma of the lung assumes such varied anatomical forms that many writers believe any type of classification to be most unprofitable. Probably in no organ of the body, unless it be the ovary, do primary tumors take on such divergent and complicated pictures. For this reason some can scarcely be diagnosed from the aspect of the gross material alone, and at times the roentgenological findings are also inconclusive or misleading. Situated in direct contact with external infection, subject to great variation in blood supply, often embedded in scar tissue, calcified or anthracotic material, a primary tumor may grow slowly and take on the appearance of pneumonia, of an abscess cavity, of tuberculosis, or of a secondary growth from a tumor of the hilus nodes, the pleura, or more remote organ.

These tumors may be described solely from the pictorial point of view as: (1) The nodular, massive form arising from the hilus; (2) the pneumonic form, or (3) the medullary-miliary form. From the point of view of surgery, however, an even more general classification is frequently followed: the infiltrating, or the circumscribed type, the latter forming perhaps 25 per cent of the cases.

From the point of view of histogenesis, three sources of these tumors have long been recognized. All of these types are exemplified in the 38 cases here described. They may be said to take origin from the

epithelium of the bronchi or bronchioles; from the mucus-producing epithelial cells lining the acini of the mucus glands of the bronchial mucosa; or from certain of the cells lining the alveoli. The origin and behavior of the latter cells are very complex and to separate a tumor derived from them, from one arising from the bronchial lining cells to which they are closely related is probably, in some cases at least, impossible.

Tumors of the hilus type make up the great majority of lung carcinomata, some authors estimating their incidence compared to those from the respiratory group as in the ratio of 7 to one. Mucus cell tumors are also rare and their existence has also been frequently questioned.

Tumors arising from the primary and secondary bronchi probably grow slowly for some time, forming a small, whitish, scirrhous tumor such as appears frequently in the breast or other fibrous organ. Gradually involving the available fibrous reticular tissue at the hilus of at least one lobe, the tumor spreads more rapidly as it extends outward along the peribronchial fibrous planes and lymphatic channels. Atelectasis, or bronchiectasis, suppuration or necrosis, or an organizing pneumonia may greatly exaggerate the apparent size of the tumor, and a shadow, usually first seen at the hilus may occupy a considerable area even more massive than the neoplasm. Serous exudate from the involvement of the subpleural lymphatics often so com-

plicates the picture that the extent of the tumor cannot be ascertained in a roentgenogram.

Tumors of the mucus glands are almost identical anatomically with others arising near the hilus, since they begin in the same portion of the bronchial tree, but are composed of mucus-secreting epithelial cells of the glands in the mucus membrane rather than from the overlying lining cylindrical cells. These tumors are highly differentiated and also excite the production of much fibrous tissue, but because of the secretion of mucus they assume a somewhat grayer, gristly, semitransparent form, as do the mucus carcinomata in other portions of the body. The local growth is usually very destructive, the supporting cartilage of the large bronchus is destroyed and firm adhesions to the parietal pleura at the hilus take place with the collapse of this portion of the bronchial tree. This tumor, although highly differentiated, metastasizes rapidly and widely, involving the liver, bones, adrenals, skin, and other organs.

The third group of tumors is one which has provoked much diversity of opinion. Since the nature of the cells lining the respiratory alveoli is even yet shrouded in uncertainty, and a field for much histological research, the tumors believed to arise from these cells must also remain in some obscurity with respect to their histogenesis. The most recent writers, however, believe that at least some of the cells lining the air sacs are epithelial, and many pathologists recognize them as the source of a small group of primary pulmonary tumors. These growths often arise in the outer portion of the lung, sometimes even close to the pleura. They are single or multiple, one of the types often so designated being a diffuse miliary form of primary carcinoma in which both lungs become studded with small discrete nodules, thus closely simulating tuberculosis or secondary tumors both in the radiographs and in the gross specimens. If, however, the tumor remains localized in one lung, a large, fairly well defined yellowish white or grayish medullary nodule may occupy a large portion of a lobe. On section this has a pneumonic aspect and resembles in color and consistency, if not in distribution, the firm, fibrous exudate occurring in lobar pneumonia. Central cavities frequently form, due to the infection, poor blood supply, and the scanty fibrous reticulum. It is not, however, to be assumed that all bronchiogenic tumors are central and sclerosing, and all respiratory tumors peripheral and medullary; for between these two extremes will be found many intermediate forms with many of the characteristics of each group,

and at the same time resembling metastatic as much as primary growths.

The histopathology may be regarded in various ways. We find it most convenient to follow the simple morphological classification of Fischer: (1) Small undifferentiated cells; (2) polymorphous cells; (3) more highly differentiated forms, including the glandular and the squamous forms.

The small-cell carcinoma is composed of very minute elliptical or spherical closely packed nuclei, with indistinguishable cell walls. These are often hard to differentiate even in stained sections from lymphosarcoma. They metastasize to the nodes readily and infiltrate the walls of the blood vessels and nerves as well as the intrinsic pulmonary tissues. The so-called oat-cell tumors are included in this group, of which we have twelve.

The polymorphous cell tumor is frequent, 11 tumors being included here. When studied in the metastases in the adrenal, for example, the bizarre character of the cells, their extreme shapes and giant multinucleated, syncytium-like masses, become apparent. Other sections show large detached, spherical, myeloid-like cells lying free in the lymphatics. Two tumors are so classified. Huguenin considers these the derivatives of alveolar cells, but other authors do not necessarily agree with this grouping, as for example, Weissmann, who believes the alveolar tumors to be composed of very tall columnar, papillary epithelium. The other nine tumors show cuboidal columnar or medullary morphology.

Nine tumors are placed in a group showing a variety of epidermoid forms. Some tend to become definitely squamous with intercellular bridges, pearls and keratinization, showing nearly all the characteristics of the Malpighian layer of the epidermis; others are more of the basal cell type but with some transitional area. Of these we have 9 instances.

Five tumors are highly differentiated, and glandular. Of these we have, agreeing with Weissmann, placed two in the group of respiratory-cell carcinoma. Fischer would designate these as mucous carcinoma and they are certainly embedded in much mucus. The cells are tall, the cytoplasm abundant, and the papillary structure constant. They replace the lining cells and fill the acini with tumor. One of these tumors was multicentric, assuming the miliary form.

One tumor, also, is definitely derived from and reproduces mucus cells.

Metastases from lung carcinoma take place with every type. The bronchial nodes are involved in about 82 per cent of the cases; the liver, on the basis of autopsy

reports, has been found to contain metastases in from 30 to 57 per cent of cases; the adrenals, either one or both, are involved in about one-fourth of the cases, and the kidneys and the brain in at least 10 per cent. The bones, especially those of the extremities and cranium, have been found to be involved in at least 20, and according to some authors, in 30 per cent of the cases. In almost every other organ some metastatic focus has been reported.

DR. HENRY M. MOSES, *Brooklyn*—The ability to condense much valuable experience and information so that it may be imparted briefly is an art possessed by a few individuals, and I feel that Dr. Frissell is to be congratulated as a master of this art, in his comprehensive presentation of such a vast and difficult subject as Primary Carcinoma of the Lung. So much attention is being centered on this condition that naturally the question arises as to whether or not primary carcinomata of the lung are occurring more frequently; or whether we are becoming more able to diagnose a condition which has existed formerly, but was not recognized. This question of increased incidence is still under discussion, and it will require more time for final decision. At Kings County Hospital, the feeling is that a more careful differentiation of pulmonary pathology is being made, due to emphasis on the subject of pulmonary new growths, and also to our greatly improved means of making a thorough examination of the patient. We have not proven satisfactorily an increased incidence of primary carcinoma of the lung.

We must keep in mind, that before the final diagnosis of primary carcinoma of the lung can be arrived at, a diagnosis of lung tumor, whether primary or secondary, must be made; and this is not always an easy diagnosis to make. Hamman, of Baltimore, states: "In the lung, tumor growth may cause cavities, bronchiectasis, erosions of blood-vessels, sometimes with fatal hemorrhages; and it may be accompanied by a bronchopneumonia, empyema, abscess or gangrene." A small symptomless lung tumor that gives no local discomfort may cause widespread metastases. The primary growth in the lung is sometimes overshadowed by metastatic growths. Cerebral symptoms in an individual suffering from obscure pulmonary complaints, should always arouse a suspicion of malignancy in the lung. When, in a person of middle age, there is an abrupt onset of the symptoms of a rapidly developing brain tumor, the condition is more likely to be secondary than primary, and the primary lesion should be looked for in the lungs.

In chronic pulmonary disease in middle age, or later, with persistence of symptoms, if accompanied by progressive loss of weight and strength, malignant disease of the lungs must always be considered.

The differential diagnosis between pulmonary neoplasm, pulmonary tuberculosis, abscess of the lung, atelectasis, and syphilis of the lung is not easy to make since there is no single symptoms, or group of symptoms, by which we may exclude these other conditions. The tubercle bacillus in the sputum, or a positive Wassermann reaction, may seem to simplify the diagnosis, but we must remember that malignancy in the lung may co-exist with their pulmonary tuberculosis or syphilis. That syphilis of the lung may simulate primary carcinoma of the lung, even to bloody pleural fluid, has been exemplified in a patient on my service at Kings County Hospital and reported in detail by my associate, Dr. H. C. Denman (*Annal. Int. Med.*, January, 1932).

For convenience of classification, patients with malignant tumors in the lungs may be divided into three groups for diagnosis:

(1) Those upon whom a diagnosis can be made *only* on post-mortem examination, either because of absence of general or pulmonary symptoms, except weakness and possibly emaciation, or because the patient is seen only when moribund and the usual physical findings of malignant tumor in the lungs are masked by other conditions.

(2) Those upon whom a diagnosis can be made easily by reason of evidence of primary tumor growth in other parts of the body, in addition to the lung findings.

(3) Those upon whom a diagnosis of new growth in the lungs can be made, because of the history, the course of the disease, the physical, the radiographic, the bronchoscopic examinations, and the absence of tumor growth in other organs.

A study, at Kings County Hospital and in private practice, of 241 pulmonary tumors, primary and secondary, with reference to primary carcinoma of the lung makes us feel that it is a disease which may occur at any age, and is not necessarily a disease of old age. Our youngest patient was 17 years old, and our oldest was 82 years old. The greatest number of patients, however, are of middle age. We believe, also, that the condition probably runs a slow course, causing few symptoms, and the attention of the patient is not referred to the disease until late in the condition, because of inflammation, destruction of tissue, or of mechanical interference with some vital function. This is the reason for the late diagnosis of pulmonary neoplasm. When the patient finally consults the physician for

cough, pain, dyspnea, hemoptysis, weakness, and emaciation, the disease is well advanced, and, at the present time, treatment is of little avail.

The problem of primary carcinoma of the lung is the problem of cancer elsewhere in the body, early diagnosis. The roentgen-ray examination reveals an advanced condition. Although some cures have been recorded of removal of small carcinomatous growths in the bronchus by means of the bronchoscope, it is difficult to get a patient with few symptoms, to submit to the necessary examination. If surgery can remove these growths before they become sources of bloodstream dissemination, or before they invade the first line of lymphatic defense we will look to surgery to cure these patients.

It seems that some method of earlier diagnosis of carcinoma in the body must be devised, either by the discovery of some chemical substances in the blood, which may be pathognomonic of carcinoma, or by some skin reaction. Localization of the carcinoma, when diagnosed as present, would then be attempted by examination of the different systems of the body. A newspaper clipping of a few days ago follows: "A new ten minute test for hidden cancers was described by Dr Gruskin of Temple University, who said it has worked successfully in 95 per cent of the cases in which it was tried. A hypodermic injection of an extract from the tissues of embryos of animals is made under the human skin and blisters result. If the edges of the blisters form hoothlike projections cancer is present."

FRAUD WARNINGS

A warning appears in a Detroit medical weekly against a former salesman of first-class German ear, nose, and throat instruments who has fallen into evil ways. A doctor writes "He called on me to sell some instruments. Not wanting any, he offered to buy any I did not want. I sold him five or six for a song, but while my back was turned he took eight or ten others worth fully \$150. He is about 38 or 40 years old, 5 feet 6 or 7 inches, weighs about 150 lbs. Any information leading to his apprehension will be appreciated. Meanwhile be on your guard when he next calls."

Similar stories come from other states, as reported in the *AMA Journal*. A man calling himself "Dr. A. Thompson" and "Dr. A. G. Thomas" has been writing checks on physicians in North Carolina and Virginia. He arranges a visit ostensibly to sell instruments and on his departure, check books, prescription forms, hospital reports and personal letters are missing. This man is about 40 years of age, 5 feet 8 or 9 inches tall, weighing about 160 pounds. He is red faced and wears heavy glasses and a brown gray suit and hat. A physician from Langshorne, Pa., reports a man calling himself Dr. A. Thompson and claiming to represent the "Associated Importing Factory, 37 West Twenty-Sixth Street, New York" selling desk blotters and felt chair covers. The physician paid him \$6, but the articles were never received. Investigation revealed that there is no such address.

From Jasper, Ala., comes the report of a man giving his name as Karter and claiming to be the head of Karter Surgical Service Company of Birmingham. Instruments valued at \$35 were given to the man to be repaired and the work paid for. When the

instruments were not returned a visit was made to the address in Birmingham, which was found to be a vacant lot. No one in the neighborhood had ever heard of "Karter." This man is described as a dark skinned, smooth shaven person about 5 feet 6 inches tall. He is said to weigh about 130 pounds and to have brown eyes. He claims to have worked for Pfau and Kny-Shearer in New York, is about 30 years of age, knows instruments and tells a plausible story.

The St. Louis Medical Society reports that a man who used the name Garrison and introduced himself as a brother of the late Dr. Fielding H. Garrison of the Welch Medical Library, Baltimore, called on the society's librarian. He told of an automobile accident and a fine and asked for a small loan to enable him to get home.

This is a true story, according to the veracious *Pennsylvania Medical Journal*, as contributed by a Philadelphia medical man.

The late Dr. Umpstead kept a very disorderly desk, it was the sole trial and tribulation of his wife's marital existence. She expostulated but in vain. To protect himself the doctor took to locking his door and putting the key in his pocket whenever he left his office. Finally conditions became so bad that the desk was piled mountain high with magazines, letters, samples, and what not. They protruded over the entire circumference of desk. In front of the doctor's chair was a space just large enough to write a postal card or a prescription. The doctor saw the error of his ways and took a radical step for reformation. He had his desk moved to the corner of his office and went out and bought a new one.

THE THYMUS GLAND: ITS RELATION TO SURGICAL RISK

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Following the revolutionary work of Lister and the later adoption of the aseptic technic, there was a marked reduction of surgical mortality, which so stimulated the surgeons of the age that a rapid improvement in surgical technic took place. This continued until about the beginning of the last decade, when it reached a state of near perfection, and it was accompanied by a further reduction of surgical mortality. Little change has taken place since that time in the death rate following standard procedures.

Individual technic may, and does vary, and will be improved only by observation and practice, but the various methods of performing operations are thoroughly described in medical literature, and clinics are plentiful wherein the proper technic is exhibited, so little more can be done to advance the mechanical part of surgery.

Sir Berkeley Moynihan wrote in 1931:

The future of surgery depends, therefore, not so much upon any advance in craftsmanship, for that is hardly possible, but in the making and cementing of alliances with all ancillary sciences, with physics, with chemistry, bacteriology, and perhaps above all with the science too much neglected today; the science of biology.

This paper is concerned with a small though important part of the large problem of surgical mortality; viz., deaths on the operating table, and is an attempt to analyze a probable cause of some of them, and suggest methods of eliminating it.

A review of all the cases operated upon at Gouverneur Hospital on the General Surgical Division during the years 1928 to 1932, which was made through the courtesy of Drs. Sellenings, Russell, Kellogg, and Grausman, revealed the following information. Three thousand seven hundred sixty-nine cases were operated upon, and there were 17 deaths on the operating table. Of these 4 could not be accounted for by the condition of the patient or the operative procedure, as all were in good condition and died within 10 minutes after the initiation of anes-

thesia, before the operation had begun. The remaining 13 cases could be accounted for by toxemia, hemorrhage, or shock, either alone or combined. Of the 4 cases, 3 were given spinal anesthesia, nupercaine being used in one, spinocaine in another, and neocaine in the other. The immediate cause of death in these 3 cases was described as circulatory collapse, and was apparently due to the anesthetic. An autopsy was performed on 2 of them; the results being a moderate degree of fatty degeneration of the liver in one, and moderate sclerosis of the coronary vessels with scarring of the myocardium in the other. The conditions necessitating operation in these 3 cases were, cystocele and rectocele, chronic cholecystitis, and ovarian cyst.

The remaining case seems to warrant more detailed consideration.

The patient was a young female, 21 years old, suffering from a cellulitis of the right hand and wrist, of approximately 72 hours' duration. Areas of fluctuation were described and an operation for incision proposed. Anesthesia was induced with nitrous oxide and oxygen followed by ether, and the patient collapsed and died 6 minutes after its induction. The exact manner of her death was not described other than by the use of the word *collapse*. An autopsy was performed and revealed the cellulitis of the right forearm and hand, congested viscera, hypertrophy of the spleen, weight 350 grams, with hyperplasia of the Malpighian bodies, and hyperplasia of the lymph follicles of the lower ileum. The anatomical diagnosis was cellulitis of the right hand and forearm, and status lymphaticus. The cause of death was described as ether narcosis; the contributory factor being status lymphaticus.

Thus it is found that out of 4 totally unexpected deaths on the operating table, 3 were attributed to spinal anesthesia, and one to the presence of status lymphaticus.

Since this condition was believed to be a greater factor in immediate operative mortality, a larger number of cases obtained from the Medical Examiner's

office was analyzed. The assumption was justified, and the cases will be reviewed, after consideration of our present knowledge of the thymus gland and its relation to surgical risk.

The significance of thymic hypertrophy is not completely understood, nor is its relation to various symptom complexes often associated with it, such as thymic stridor and status lymphaticus. Therefore, before discussing the treatment of these conditions or their effect upon operative risk, it seems necessary to describe them, to review the essential points in the anatomy and physiology of the gland, and the positive experimental work that has been accomplished. From such material certain conclusions may be obtained which may be applied in the selection of cases for operation and in preoperative treatment.

There is considerable variation in the size and shape of the thymus gland. At birth the gland is relatively broad and triangular, but according to Noback¹ and other anatomists, it is molded by the respiratory movements during the first two weeks of life into an elongated triangle, with its base resting on the pericardium. Sometimes portions of the gland are pushed back into the posterior mediastinum and around the great vessels and nerves.

It is difficult to establish a standard of normal size, because of variations attributable to age, pathologic involution, different degrees of lymphatic constitution, and other factors. The generally accepted standards of normal are based upon size in relation to age, the size being estimated in weight. The average weights in relation to age are as follows:

Years	grams	Years	grams
Newborn	13 00	26-35	11 50
1-5	22 25	36-45	16 00
6-10	27 50	46-55	13 00
11-15	32 33	56-65	16 00
16-20	24 00	66-75	6 00
21-25	25 00		

These averages are based on the figures of Friedleben,² Von Sury,³ Hammar⁴ and Bratton.⁵

Anatomists agree that the weight of the thymus decreases during the first few weeks of life, increases rapidly until the end of the second year, remains about the same until the seventh year, increases

slightly until puberty, then decreases rapidly for four or five years, and gradually thereafter. The reason for this abrupt change at puberty is not known.

Pathological involution may occur at any age, and the changes in the gland are indistinguishable from those produced by the normal involution due to age. In both the lymphoid elements are markedly reduced, and the medulla only slightly. Pathological involution is rapid when begun, and is seen in a number of conditions, such as acute and chronic infections, various intoxications, inanition, pregnancy, and following Roentgen-ray exposure. According to Marine,⁶ the gland may shrink to one-fifth of its weight within one week. Upon the return of favorable conditions, regeneration may take place rapidly.

It is reported by His,⁷ Stieda,⁸ Hammar⁹ and Maximow,¹⁰ that the reticulum and Hassall's corpuscles of the thymus are developed from the epithelial anlage, whereas the small thymic cells and eosinophiles are derived from mesenchyme, and have migrated into the gland. They believe that after this migration has taken place, the thymus develops like any other lymphoid tissue. This assumption seems tenable, as the small thymic cells resemble lymphocytes in shape, movements, serological reactions, pathological behavior, susceptibility to the Roentgen ray, and because the growth curve of the thymus is parallel to that of the mesenteric lymph nodes.

The exact function of the thymus gland is not known. Friedleben¹¹ first demonstrated that the gland is not essential to life, and his observations have been confirmed by Park and McClure,¹² and other observers. All agree that the thymus is an important source of the lymphocytes in the blood.

The most interesting facts about the thymus are those concerning its relation to other glands. Calzolari¹³ showed that the removal of the testis in young rabbits delayed involution of the thymus, and his work has been confirmed by Henderson,¹⁴ Goodall,¹⁵ Gellin,¹⁶ and Marine, Manley, and Baumann.¹⁷ The last three observers have shown that suprarenalectomy in rabbits prevents the involution of the thymus, and may cause regeneration of the highly involuted gland, and thymic

lichen Todesfällen im Kindesalter, *Vrtljschr. f. gerichtl. Med.* 36:88, 1908.

4. Hammar, J. A.: Ueber Gewicht Involution und Persistenz der Thymus in Postfotalleben des Menschen, *Arch. f. Anat. U. Physiol., Anat. Abt.*, suppl. vol.: 91, 1906.

5. Bratton, A. B.: Normal Weight of Human Thymus, *J. Path. & Bacteriol.* 28:609, 1925.

6. Marine, D.: Status Lymphaticus, *Arch. Path.* 5: April 1928.

7. His, W.: Zur Anatomie der menschlichen Thymusdrüse, *Ztschr. f. wissensch. Zool.* 11: 164, 1862.

8. Stieda, L.: *Untersuchungen über die Entwicklung der Glandular thymus, Glandula thyroidea und Glandula carotica*, Leipzig, 1881, W. Engelmann, 38 pp., 2 pl., fol.

9. Hammar, J. A.: Ueber die Natur der kleinen Thymuszellen, *Arch. f. Anat. u. Entwicklungsgesch.*, Leipzig, 1907, 83-100.

10. Maximow, A.: Ueber die Histogenese der Thymus, bei Amphibian, *Arch. f. mikr. Anat.*, Bonn, 1812, lxxix, 1. Abt., 560-611, 3 pl.

11. Friedleben, A.: *Die Physiologie der Thymus Inise*, Frankfurt-am-Main, 1858, p. 366.

12. Park, E. A., and McClure, R. D.: Results of Thymus Extirpation in Dog, *Am. J. Dis. Child.* 18:317, 1919.

13. Calzolari, A.: Recherches experimentales sur un Rapport probable Entre la Fonction du Thymus et Celle des Testicules, *Arch. Ital. de Biol.* 30:71, 1898.

14. Henderson, J.: On the Relationship of Thymus to Sexual Organs, 1. The influence of Castration on Thymus, *J. Physiol.* 31:222, 1904.

15. Goodall, A.: The Post-Natal Changes in the Thymus of Guinea Pigs, and the Effect of Castration on Thymus Structure, *J. Physiol.* 32:191, 1905.

16. Gellin, O.: Die Thymus nach Exstirpation, bezw. Rontgenbestrahlung der Geschlechts drüsen, *Ztschr. f. exper. Path. u. Therap.* 8:71, 1911.

17. Marine, D., Manley, O. T., and Baumann, E. J.: Influence of Thyroidectomy, Gonadectomy, and Suprarenalectomy on Thymus Gland of Rabbits, *J. Exper. Med.* 40:429, 1924.

18. Jaffe, H. L.: Influence of Suprarenal Gland on Thymus; Regeneration of Thymus Following Double Suprarenalectomy in Rat, *J. Exper. Med.* 40:325, 1924.

19. Jeandelize, P., Lucien M., and Parisot, J.: Modifications du poids du thymus apres la thyroïdectomie chez la lapin, *Comp. Rend. Soc. de Biol.* 66:942, 1909.

20. Boyd, E.: Growth of Thymus; its Relation to Status Thymicolymphaticus and Thymic Symptoms, *Am. J. Dis. Child.* 33:867, June, 1927.

21. Hammar, J. A.: New Views as to Morphology of Thymus, and Their Bearing on

Problem of Function of Thymus, *Endocrinology* 5:543, 1921.

22. Symmers, D.: Status Lymphaticus, *Am. J. M. Sc.* 156:40, 1918.

23. Ray, H. M.: Status Lymphaticus, *Ann. Int. Med.* 2:941, 1929.

24. Lewis, J. T.: Effect of Experimental Suprarenalectomy, *Rev. Assoc. Med. Argent.* 33:629, 1920.

25. Scott, W. J. M.: Influence of Adrenal Glands on Resistance; Susceptibility of Adrenalectomized Rats to Morphine, *J. Exper. Med.* 38:543, 1923.

26. Lewis, J. T.: Extirpation of Adrenal Glands on Albino Rats, *Am. J. Physiol.* 503, May, 1923.

27. Scott, W. J. M.: Influence of Adrenal Glands on Resistance; Toxic Effect of Killed Bacteria in Adrenalectomized Rats, *J. Exper. Med.* 39:457, 1924.

28. Take, N. M., and Marine, D.: Effect of Suprarenalectomy in Rabbits on Hemolysin Formation, *J. Infect. Dis.* 33:217, 1923.

29. Wiesel, J.: Anatomy, Physiology, and Pathology of the Chromaffin System, with Special Reference to Addison's Disease and Status Thymicus, *Internat. Clinic.*, Philadelphia, 1905, 15: S.ii 288-306, 4 pl.

30. Marine, D., and Jaffe, H. L.: Effect of Suprarenalectomy in Rats on Agglutinin Formation, *J. Infect. Dis.* 35:334, 1924.

31. Tanabe, B.: Notes on Relation between Preventive Inoculations and Status Lymphaticus, *Military Surgeon* 52:83, 1923.

32. Muller, H.: 1917 Beiträge zur Physiologie der Drüsen. xxxiii. Eine neue Funktion des inneren Sekretes der Thymus Drüse. *z. f. Biol.* (München und Berlin), 67:489-506.

33. Del Campo, E.: 1918 Beiträge zur Physiologie der Drüsen. xxxiv. Fortgesetzte Untersuchungen über eine neue Funktion des innern Sekretes der Thymusdrüse. *z. f. Biol.* (München und Berlin), 68:285-300.

34. Symmers, D.: Status Lymphaticus, *Am. J. Dis. Child.* 14:463, 1917.

35. Pappenheimer, A. M.: A Contribution to Normal and Pathological Histology of Thymus Gland, *Jour. Med. Res.* 22:1, 1910.

36. Graves, G. W., and Perkins, C. W.: Thymus Considered with Reference to Advisability of its Routine X-Ray in Pediatric Surgery, *M. Clin. N. Amer.* 10:885, 1927.

37. Mosher, H. P., MacMillan, A. S., and Motley, F. E.: Clinical and Preoperative Study of Thymus in Children of Tonsil and Adenoid Age, *Laryngoscope* 36:1, 1926.

38. O'Brien, F. W.: Diagnosis and Treatment of Enlarged Thymus by X-Ray, *New England J. Med.* 199:657, 1928.

39. Greenthal, R. M.: Incidence of Thymic Enlargement without Symptoms in Infants and Children, *Am. J. Dis. Child.* 24:433, 1922.

A certain poetic justice was done when three swindlers selling a "Warm Springs Crystal Compound" found themselves in hot water. Examination proved that their "crystal compound" was merely Glauber's salts, or horse laxative, which they bought

for a few cents a pound and sold for a dollar a pound. Their office was in Warm Springs, and they traded on the fame of the President's "other home," but the crystals did not come from the Springs. They are now enjoying free accommodations.

THE SYMPHYSIS PUBIS AND ITS RELATION TO BACKACHE

MILTON G. POTTER, M.D., F.A.C.S., *Buffalo*

Low backache in women during the prenatal and postpartum periods may be a troublesome problem both from a diagnostic and therapeutic standpoint.

I believe that too often we have been prone to avoid the symptom of backache in pregnant women by remarking that the symptoms are due to pressure and that there is little that can be done about it. Doubtless many of the cases do suffer from pressure backache. An extensive literature has been developed around this subject and innumerable causes are cited, but so far the theoretical has shown scant return from the standpoint of treatment and one is led to conclude that concrete fundamental knowledge of this subject is still lacking.

Most of the explanations fail to explain satisfactorily those cases in which backache appears during pregnancy and continues postpartum, sometimes in such severity as to threaten or actually produce chronic back invalids.

The advance in endocrinology has changed many of our concepts of the physiological mechanism of the pelvic organs and joints and it would seem time to gear our ideas concerning possible causation of backache with these proven physiological concepts.

It would seem an appropriate time to call attention to the subject of the possible changes in the bony pelvis. Seldom is the mobility or the absence of mobility of the symphysis examined. It is this joint which acts as an indicator or registering board of the changes which take place in the pelvic joints during prenatal and postpartum periods.

Since the time of the early Greek physicians spasmodic interest has been noted in this problem. Knox noted pelvic joint changes during pregnancy in the cow, Burlew in the seal, Hisaw in guinea pigs, cats, and rabbits³. Hisaw also established the fact that hormonal control produced joint changes and was able to isolate the causative substance which appeared to be a fraction of the corpus luteum hormone.

While minor degrees of relaxation of the pelvic joints have been regarded by

observers as physiological so long as no clinical symptoms have manifested themselves, the more extensive use of x-ray and the improved methods of measurement reveal interesting facts concerning the pelvic girdle.^{1,7,8}

Heyman and Lundquist⁵ revived interest in this subject by their x-ray studies and measurements on pregnant and nonpregnant women. About the same time Abramson, Roberts, and Wilson took up this question at the Boston Lying In Hospital, as did Barnes in Buffalo.^{2,6}

The Boston group feel that relaxation occurs early in pregnancy and little tendency to increase during the last two or three months; while Barnes feels that definite widening first appears about the middle of the second trimester and increases up to the time of delivery. In addition there is disagreement concerning primiparae and multiparae, Abramson, Roberts, and Wilson believing there is little difference, while Barnes shows there is a greater degree of relaxation in multiparae.

The conclusions reached by these three independent groups of workers were for the most part in accord; viz.:

- (1) Pelvic relaxation during pregnancy is a normal physiological process which occurs in the majority of cases (50-60% according to Barnes).

- (2) All agree that hormonal control is probably the causative factor.

- (3) The increase in pelvic diameters and mobility of the symphysis pubis vary.

- (4) Approximately 25% of the cases show abnormal relaxation.

- (5) Age has very little to do with changes in the pelvic joints.

- (6) Average increase of width of the symphysis is between 3-4 mms. during pregnancy.

- (7) The symphysis usually returns to normal width within one month.

Many of the patients in Barnes' series were under our care and following his correlation of anatomical findings with the roentgenological appearance of the pelvis it occurred to us that a further

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attempt to correlate the physical symptoms of those same patients with their x-ray reports might prove interesting. A further study of these patients might be of particular value since we were in a position to rule out the pelvic organs as a cause of backache.

While it is not our idea to give the impression that we believe all backaches are due to joint changes, we do believe that the possibility of excessively relaxed or relatively fixed pelvic joints should be kept in mind, particularly after careful pelvic examinations reveals no gynecological pathology.

Questionnaires were sent to 75 of our private patients whose pelves had been x-rayed at least twice during the prenatal period and again checked during the postpartum period. Bimanual pelvic examination and inspection of the cervix showed no pathology following delivery in these cases. Fifty-two of these patients had no ante or postpartum complaints, but 23 complained of low backache during and after pregnancy, particularly when overtired.

Upon studying the reports of these women we were impressed by the fact that the group who complained of nothing, showed the most marked variations of the symphysis. Asymmetry of the pubic rami was common as were the variations of the width of the symphysis. Greater separations were noted in the multiparous women.

The painful group, as a general rule, demonstrated little or no widening of the symphysis. The pubic faces, in a number of cases, showed mixed changes of sclerosis and rarefaction with fringing of the borders, the appearance being that described by Barnes as the relatively non-flexible, rigid pelvis. Clinically the women who complained the most usually showed that type of picture and were definitely in the dystocia dystrophia syndrome group.

To be more explicit, these women revealed short stature, thick short necks, stubby fingers and toes, and exhibited male hair distribution. Their menstrual periods were irregular and clinically the pelvis was a male type, characterized by a high symphysis, a narrow arch, and normal external measurements.

These women invariably stated that

their backaches were low and were made worse by pregnancy. The backache appeared late in pregnancy and often persisted following delivery. Fatigue exaggerated the backache. The knee chest position did not relieve them and they felt best when wearing a corset.

If the concept that the anterior portion of the pituitary serves as an exciting agent for the proper functioning of the ovarian hormones is correct, and if Hisaw's work of isolating a hormonal substance, which he calls relaxin is accepted, a reasonable explanation for lack of normal pelvic flexibility during and after pregnancy, can be assumed in the dystocia dystrophia syndrome group, which in reality are hypo pituitary cases.

It would seem to us that the relatively subnormal flexibility of the pelvic joints, particularly the lumbosacral joint, is accounted for, because of pituitary dysfunction with failure to activate the appropriate amount of relaxin.

It is our belief also that as pregnancy progresses there develops a lumbar lordosis with resulting exaggeration of the lumbosacral angle and in addition the range of motion in this joint is increased.

According to Uebermuth there are also changes in the intervertebral discs with a loss of elasticity, sclerosis of weight-bearing surfaces and cupping, which produce static changes and hence backache.

While the above explanations may serve for the dystocia dystrophia group, the picture, of the women complaining of backache, who have the gynoid type of pelvis with moderate widening of the symphysis, is not clear.

Could the enormous varicosities which we see so frequently in the broad ligaments during cesarean sections be a factor? We are at a loss for an explanation.

DeLee believes that a loosening of the sacrum from the innominate bones explains many of these cases of backache during and following pregnancy.⁷

Martius states that if we are to concede that general relaxation of all joints occurs during pregnancy, we must keep in mind the relaxation of the ligamentous lumbosacral joint and its structures and conceive of a dropping of the lumbosacral supporting apparatus with a resulting disruption of the statics of the pelvis, so that the lumbar curve is shifted in such

a way that the fifth lumbar vertebra functions as part of the sacrum.⁴

General concepts cannot be drawn from the study of such a small group or cases. Our desire is, however, to stimulate further investigation.

While many of our findings are not clear cut, we have gained the definite impression, contrary to our earlier personal beliefs, that patients with abnormally relaxed pelvic joints or patients with completely rigid, fixed pelves, do not as a rule, complain of backache. The complaining patients are those who become over-tired and who reveal relatively nonflexible pelves.

Summary

(1) X-ray and clinical study of the symphysis pubis during and after pregnancy reveals interesting obstetrical data.

(2) Normally there is a physiologic flexibility of the pelvis during pregnancy in the majority of cases.

(3) Low backache is less frequent in those cases where flexibility of pelvis can be demonstrated, provided that gynecological and urological causes have been eliminated.

(4) Low backache is invariably present during and after pregnancy in those women who have relatively nonflexible pelves.

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References

1. Eymmer, H., and Lang, F. J.: Anatomische Untersuchungen der Symphyse der Frau in Hinblick auf die Geburt und Kinische Deutung der Befunde, *Arch. Gynak.*, 1928.

2. Abramson, D., Roberts, S. M., and Wilson, P. D.: Relaxation of the Pelvic Joints in Pregnancy, *Surg. Gynec. & Obstet.* 58:595, 1934.

3. Hisaw: Experimental Relaxation of Pelvic Ligaments of the Guinea Pig, *Physiol. Zool.* 2:59, 1929.

4. Martius, H.: Unbauformen und Andere Anomalien der Unteren Birkelsaule und ihre

Pathogenetische Bedeutung, *Arch. Gynak.*, 1929-1930.

5. Hyeman, James, and Lundquist, A.: The Symphysis Pubis in Pregnancy and Parturition, *Acta Obst. et Gynec. Scand'new*, 1932.

6. Barnes, John M.: Symphysis Pubis in the Female, *Amer. Jour. Roentgen. & Rad. Therapy*, 32: 1934.

7. DeLee, J. B.: *The Principles and Practice of Obstetrics*, W. B. Saunders Co., Philadelphia, 1929.

8. Caldwell, W. E., and Moloy, H. C.: Sexual Variations in the Pelvis, *Science* 76: 1932.

VERRUCA PLANTARIS

A Method of Removal by Electrosurgery

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Warts of all types are frequently amenable to treatment by the x-rays¹ or to indirect procedures such as intramuscular injections of sulpharsphenamine² or the bismuth salts.³ Psychotherapy⁴ may also be successful. Such measures sometimes fail. Since plantar warts almost always cause pain which is often severe, it may be imperative to institute treatment offering quick relief.

The local eradication of plantar warts may be technically difficult because of their physical characteristics. Unlike common warts which mainly protrude above the skin surface, plantar warts are both below the level of the skin and flattened so that the lesions are deeper and wider

than would appear from the visible portion. This is considered due to pressure from the weight of the body.

While local destruction by means of the actual cautery or electrodesiccation, with or without curettage, is a common method of treatment of the common wart, such treatment might fail to entirely remove a plantar wart, in which case a recurrence may be expected. If normal tissue in the region of the wart is destroyed during the operation, healing is delayed and the patient experiences varying degrees of pain and discomfort. Scalpel surgery frequently fails because the incision is not wide enough; conversely, the wound from a wide incision on the sole may be diffi-

cult to approximate. Damage to underlying structures has not been unknown following various destructive procedures. The so-called cutting current should never be employed because of the difficulty in estimating the extent of its action. The following method of electrosurgery has been found advantageous because it is technically simple, with no danger of damage to adjacent tissues, with very little if any after pain, and because healing of the resultant wound is rapid. Since the entire wart is enucleated, no recurrence need be feared.

Method

The wart is anesthetized by means of the subcutaneous infiltration of 1 per cent procaine. The surface of the wart is desiccated by a medium spark without inserting the needle below the surface. (This is necessary to keep the wart from disintegrating when removed.) Care should be exercised that the normal skin is not injured. An incision is made with a pair of scissors just beyond the charred area. A "scoop" curet is inserted in the incision; a line of cleavage will be found

and the entire wart "shelled out" in toto. The under surface of the removed tissue is smooth and glistening. Light curettage of the base is followed by trimming of the edges of the wound. Firm pressure applied for from five to ten minutes is usually sufficient to arrest bleeding. No further electrodesiccation is necessary or advisable; healing proceeds more quickly if the epithelial lining of the cavity is intact. When hemostasis is complete, a 1 per cent aqueous solution of gentian violet is applied. A thick flat dressing is strapped over the wound. This should be changed in two hours and daily thereafter. Healing is complete within one to two weeks. During this period, the patient is allowed to pursue his normal activities and suffers little, if any, inconvenience.

Summary

A method of removing plantar warts based on anatomical considerations is described. Its advantages are mentioned. While particularly suited to the removal of plantar warts, it may also be used in the treatment of warts on other parts of the body.

200 WEST 59TH STREET

References

1. MacKee, G. M.: *X-Ray and Radium in the Treatment of Diseases of the Skin*. Philadelphia, Lea & Febiger, 1927, p. 612.
2. Sutton, R. L.: Sulpharsphenamine in the Treatment of Warts, *J.A.M.A.* 87:1127, 1926.
3. Allington, H. V.: Sulpharsphenamine in the Treatment of Warts, *Arch. Dermat. & Syph.* 29:686, 1934.
3. Lurie, S. A.: Verrucae Vulgares (Palmar and Plantar): Treatment by Intramuscular Injections of Bismuth Salicylate, *Arch. Dermat. & Syph.* 26:95, 1932.
4. Bloch, B.: Über die Heilung der Warzen durch Suggestion, *Klin. Wchnschr.* 6:2271 and 2320, 1927.

RELIABLE APPARATUS

The JOURNAL has received from the American Medical Association a small pamphlet containing a list of the apparatus accepted by the Council on Physical Therapy, the first one published under the direction and supervision of the Council. In addition to the list and description of accepted apparatus, the pamphlet contains indications for the use of each type and a statement relative to efficacies and dangers.

This pamphlet is a real contribution on the part of the American Medical Association in behalf of rational therapeutics—an effort to help place physical therapy on a sound, scientific basis for the benefit of the medical profession.

One of the purposes of the Council on Physical Therapy is to protect the medical profession, and thereby the public, against

inefficient and possibly dangerous apparatus and against misleading and deceptive advertising in connection with the manufacture and sale of devices for physical therapy.

"Apparatus Accepted" includes all the devices accepted by the Council prior to May, 1935. Any physician can obtain this pamphlet free by writing to the Secretary, Council on Physical Therapy, A.M.A., 535 North Dearborn Street, Chicago, Illinois.

An able and esteemed medical journal published in Chicago prints a poem on one page about typographical errors and five pages further on prints a statement that socialized medicine will kill our "demoncracy." Some would call it the right word at that.

ERYTHROBLASTOSIS FETALIS

Report of a Case

HAROLD A PECK, M D, *Albany*

The finding of varying degrees of icterus at birth or shortly thereafter has been described in the literature for many years past under the terms "icterus gravis" or "familial jaundice of the newborn." Its association with an erythroblastic process in the blood is of more recent date. In fact, there are three conditions which are described as being very closely linked with and part of the general picture of erythroblastosis or as Arnold and Downey¹ prefer to call it "hyperplastic hemolytic anemia," viz (a) Congenital hydrops fetalis, (b) icterus gravis neonatorum, and (c) hemolytic anemia. Lightwood and Hawksley² say that "erythroblastosis fetalis comprises three different clinical syndromes which may overlap and the same mother may beget successive children presenting in turn these different manifestations. Careful histopathological studies have confirmed these deductions. The condition may be familial and the first-born is usually spared."

The pathology consists of a reversion to or a continuation of the embryonic level of blood formation so that there are large numbers of immature red blood cells in the fetal circulation as well as lesser numbers of myeloid leukocytes. Besides the overactivity of the bone marrow, there is an associated hematopoiesis of all the accessory blood making organs including the liver, spleen, pancreas, adrenal, kidney, thymus, pituitary, and lymph nodes. There is a concomitant destruction of mature red cells producing varying grades of anemia, and as a result of the liberation of the large amounts of coloring matter from both the mature and immature red cells there is a deep or deepening jaundice which usually rapidly proves fatal. There is little if any edema in the icterus gravis cases although slight serous effusions may occur. The heart may be slightly enlarged. The liver and spleen are often enlarged. The extrahepatic bile ducts are normal. The brain is frequently icteric with intense pigmentation of the

nuclear structures, a condition described in the literature as "kernicterus." The placenta may be normal in appearance or enlarged up to one and one-half times although it is neither pale nor firm. Bile staining of the membranes is sometimes observed.

The diagnosis is based upon the clinical picture of early severe jaundice accompanied by large numbers of erythroblasts in the fetal circulation, a hyperchromic anemia invariably, golden yellow vernix caseosa; dusky cyanosis with petechial hemorrhages or ecchymosis, cardiac, liver, and splenic enlargement may be present. The mature red cell count averages 2,000,000 to 4,000,000, the nucleated cell count may pass 100,000 with an absolute increase in nucleated red cells. Buhrman and Sanford³ report a case in which the nucleated cell count five hours after birth was 474,000, of which 45 per cent were nucleated red cells. The stools are not acholic and the urine contains bile pigment. The indirect Van den Bergh test is positive. Lippman⁴ has shown from examination of the blood of 71 newborn that the red cell count runs from 5,200,000 to 5,600,000 at birth and is down to 4,000,000 by the end of the first week, the total nucleated cell count varying from 20,000 to 25,000 with 5 nucleated red cells to each 100 nucleated cells and by the second day the nucleated red cell count should be below 1 per cent. The presence of nucleated red cells in high numbers is not pathognomonic of erythroblastosis alone, they have been found in congenital heart disease and congenital lues.

The differential diagnosis of various diseases of the newborn with which this condition may be confounded is given in Table I.

The prognosis is grave. Clifford and Hertig⁵ report a series of seven cases seen at the Boston Lying In Hospital during nine months, which is an unusual series. Two of the cases were of the congenital hydrops type and five were of the icterus

gravis variety. Five of the seven died. They say: "It runs the major part of its course *in utero* and the first few days of life; it may occur in either sex; there is no racial predilection and its occurrence is not related to tuberculosis, syphilis, toxemia, or anemia in the mother." It has been estimated that the blood picture found in the disease is closely akin to that found in the fetus at 24 weeks.

The incidence of the disease has been given as 1 to 2,000-3,000.

Sequelae: According to Hawksley and Lightwood⁶ among the known sequelae in non-fatal cases are anemia and nervous

manifestations. Evidence is given suggesting that some cases of idiopathic juvenile cirrhosis and splenic anemia may take their origin in icterus gravis and that the etiologic background of hepatolenticular degeneration may be related to kernicterus.

Treatment: Blood given intravenously is the method of choice although several of the reports mentioned giving it intramuscularly. As many as 8-10 small transfusions, 50-100 c.c. at a time have been given to affect a cure. After the immediate symptoms have cleared up, the babies are given treatment to combat the anemia

TABLE I

Disease	Jaundice	Time of Appearance	Edema	Anemia	Cyanosis	Bleeding	Hypertrophy	Dyspnea	Blood
Icterus neonatorum.....	Sl. Yes	12-24 hrs.	0	0	0	0	0	0	N
Cong. oblit. of bile ducts...	Yes	2-3 weeks	0	0	0	Maybe	Liver. Per qt. liver clay-stools	0	N
Jaun. assoc. with sepsis.	Yes	Later than erythroblastosis	Maybe	Maybe	0	Maybe	Presence or absence of fever not diagnostic at this age		
Winkels disease.....	Yes				Yes	Hemoglobinuria			
Cong. syph...	Blood Wassermann and X-ray of the long bones								
Cong. heart disease.....	Not to be expected		Yes		Yes		Cardiac	Yes	
Intracranial hemm.....	None		None		Yes		Muscular twitching	Yes	
	In erythroblastosis with symptoms suggesting intracranial hemorrhage but without bleeding, lumbar and subdural taps normal								
Hem. disease of newborn.	Not severe		None		None unless hem. into cent. nervous syst.		None		
Idiopathic anemia of the newborn	Possible relation between erythroblastosis with its anemia that persists long after the acute symptoms have disappeared and idiopathic anemia is at present the subject of several investigations. There is a question whether idiopathic anemia is a clinical entity or whether it is one stage or phase of the erythroblastic process.								

TABLE II

Date	Erythrocytes per cu. mm.	Nucleated RBC per 100 WBC	Anisocytosis	Poikilocytosis	Polychromatophilia	Hemoglobin (Grams)	Hellige (%)	Color Index	White cells per cu. mm.	Neutrophils %	Eosinophils %	Basophils %	Small lymphocytes	Endothelial cells	Bleeding time, minutes	Coagulation time, minutes	Myelocytes
3/3/34	2,330,000	75	MKD	MOD	MOD	9.2	61	1.3	136,600	43	4	1	15	0	7	3½	37
3/5	3,450,000	50	"	"	"	13...	89	1.3	30,200	55	1	...	19	...	13	3	25
3/6	3,450,000	52	"	"	"	13...	89	1.3	30,080	61	4	1	24	1	15	3	9
3/7	3,450,000	29	"	"	"	13...	...	...	13,480	70	...	2	16	...	19	4	12
3/8	3,870,000	6	MOD	"	"	14...	96	1.3	11,760	43	2	1	47	...	9	4	7
3/10	3,560,000	4	"	"	"	13.8	95	1.3	10,520	31	4	1	60	...	21	4	4
3/12	3,100,000	3	"	"	"	11.4	78	1.2	7,600	47	6	2	40	1	9	4	4
3/13	2,830,000	...	"	MOD	SL	10.8	74	1.3	8,400	26	3	2	65	...	7	3½	4
3/15	2,850,000	...	"	SL	"	10.8	74	1.3	11,640	55	2	1	34	4	5	3½	4
3/16	2,870,000	3	"	"	MOD	11	75	1.3	10,250	44	2	1	47	1	4¾	3	5
3/17	2,900,000	2	"	"	"	11	75	1.3	10,760	51	5	...	42	...	4	3	4
3/20	2,910,000	1	"	"	"	11.2	77	1.3	12,160	50	3	...	42	...	4	3	4
3/21	3,120,000	1	"	"	"	11.4	78	1.2	11,080	46	8	...	42	1	4	3	3
3/22	3,230,000	...	"	"	"	11.6	80	1.2	13,200	48	9	...	38	1	4½	3	2
3/23	3,000,000	1	"	"	"	11.2	77	1.3	9,400	48	6	2	42	...	...	...	2
3/24	3,020,000	1	"	"	"	11.4	78	1.2	8,720	41	5	2	51	...	...	...	1
3/27	3,360,000	...	"	MOD	"	11	75	1.1	9,360	40	7	3	47	...	...	...	3
3/28	3,280,000	...	"	"	"	11.6	80	1.2	11,800	38	12	...	49	...	...	...	1
3/30	3,230,000	...	"	SL	"	12.4	85	1.3	8,920	30	10	...	59	...	...	...	1
3/31	3,250,000	1	"	"	"	11.6	80	1.2	8,600	44	12	...	43	...	...	...	1
4/5	3,560,000	...	"	"	"	13	89	1.2	8,520	26	6	...	65	3	...	...	...
5/4	3,340,000	...	"	0	0	14.5	100	1.5	8,800	30	8	...	55	6	...	...	1

which invariably follows such as some combination of liver extract with iron and copper. Arnold and Downey¹ put much emphasis on the hemoglobin determination as an index to treatment, stating that it must be kept up to a level of at least 70 to 80 per cent.

Case Report

Baby W., born at 1:40 A.M., March 3, 1934. Cesarean section performed because of a third-degree laceration sustained at delivery of the first baby in November, 1931, which healed with good anatomical and functional results. The first baby was stillborn due to asphyxia from a prolapsed cord. It was otherwise apparently normal. The present baby at birth was markedly jaundiced (see Fig. 1) and covered with a large amount of golden yellow vernix. There were several small ecchymotic spots on the cheeks beneath each eye. It was in a state of asphyxia livida which responded favorably to insufflations of carbon dioxide (5 per cent) and oxygen (95 per cent) for four minutes. It was put in the incubator which was set at 90° F. At 9.00 A.M. the ecchymotic spots were more prominent. At



Fig. 1. Picture taken the day of birth, showing the baby lying beside a baby with normal coloring. Ecchymotic spots on the cheeks apparent.

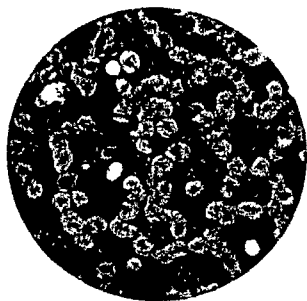


Fig. 2. Representative area taken from smear of blood made on March 6, 1934. Shows 3 nucleated red cells, poikilocytosis, anisocytosis, and polychromatophilia. $\times 900$.

1.00 P.M. blood was taken for a complete count, the results of which are shown in Table II. At 9:30 P.M. March 3, 10 c.c. of father's blood was given intramuscularly under the scapular muscles. Calcium gluconate, drams one-half dissolved in two ounces of boiled water, were given per os every three hours. The stool passed at this time was the typical meconium. On March 4 at 1:00 P.M., another intramuscular injection

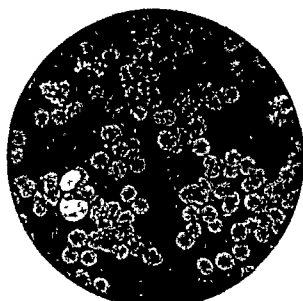


Fig. 3. Representative area taken from smear made on March 15, 1934. Shows more normal general picture of blood; better staining quality, less change in size and shape of red cells and more platelets to each field. No nucleated cells found. $\times 900$.

tion of father's blood 10 c.c. was given intramuscularly. Calcium gluconate continued per os as above. The color of the baby was about the same but the ecchymosis was not as prominent. Physical examination did not reveal any appreciable enlargement of the liver or spleen. The case was seen by Dr. Frank Williams who supervised the feedings. There was no sign of atelectasis,

the cry was lusty nor was there any sign or symptom of cerebral irritation. Baby was taking all feedings well. There was no sign of bleeding from any of the mucous membranes. Stools were typical meconium.

On March 5, the color was much deeper. Calmum gluconate was added to the Reolac feedings every 3 hours. The stools were greenish; urine very dark mahogany and reacted for bile with iodine. On March 6, baby had 6 greenish stools; negative for blood. Treatment continued as before. General condition good. Very jaundiced. Treatment continued as above up to March 9 when the calcium gluconate was given by



Fig. 4. Picture of baby taken on October 22, 1934, showing normal coloring and normal reacting youngster at seven and one-half months

intramuscular injection in the buttock because of baby spitting up some of its feeding and possibly losing the value of the drug.

On March 10, the color was definitely improved. On March 11, the stools were brownish. On March 12, the stools were yellow; the cord stump came off with no bleeding therefrom. On March 13-21, the appetite good; gave Reolac $1\frac{1}{2}$ tablespoons to 3 ounces of water every 3 hours. In the first morning bottle was put the contents of a capsule containing iron, copper, and calcium gluconate, the trade name of which is Trigucon. On March 21-28 the condition was good, with color improving. Viosterol Mx added to the food morning and night.

On March 28 to April 6 the condition was good, with color improving but still quite yellow, more the color of an anemia. The baby, a bright appearing baby for its age, was discharged, having regained its birth-weight, 6 pounds, 12 ounces. Has an area of induration in each buttock from the calcium injections which cleared up after serial sitzbaths at home.

A blood count made May 4 still showed a hyperchromic anemia (see Table II) but no nucleated red cells were found. One myelocyte was seen. Wassermanns on the mother, father, and baby were negative. A blood count on the mother and father were normal. X-ray of the baby's skeletal system was negative for lues. The results of nearly consecutive blood examinations from the day of birth up to one month are shown in Table II, with a check-up at the end of two months.

On October 22, the baby weighed 15 pounds and appeared to be a very healthy specimen. Color was normal and the reactions were normal. (See Fig. 4.) One Trigucon capsule was given daily up to October 15. Blood examination showed: RBC, 5,200,000; WBC, 8,800; Hgb, 96 per cent (Dare); color index, 0.92; differential; neutrophiles, 48 per cent; lymphocytes, 49 per cent; eosinophiles, 2 per cent; basophiles, 0 per cent; endothelial cells, 1 per cent. In Table II it will also be seen that the coagulation time was within the accepted normal limits at all times (Rodda 5-9 min.) but that the bleeding time did not come within the accepted normal (Duke 2-5 min) until the 12th day.

Summary

1. A composite picture of the grave condition described as erythroblastosis fetalis accompanied by icterus is given as found in the literature.

2. The clinical picture with the laboratory findings of a case observed by the author is given.

3. Blood studies showed large numbers of erythroblasts in the peripheral blood at birth as well as lesser numbers of myelocytes. The coagulation time was within normal limits at all times while the bleeding time did not come within these limits until the 12th day. A hyperchromic anemia persisted for at least two months.

4. Intense jaundice was present at birth and the vernix was a golden yellow color. Ecchymotic spots were present on both cheeks. There was no appreciable enlargement of the liver or spleen

5 The treatment consisted of the use of father's blood intramuscularly augmented by calcium gluconate by mouth and intramuscularly and a combination of iron, copper, and calcium to combat the anemia

Acknowledgment

The author desires to acknowledge the work done on the blood by Miss Theresa Powers

219 LARK STREET

References

- 1 Arnold, Douglas P, and Downey, Richard A. *NEW YORK STATE JOURNAL OF MEDICINE* 34 591, 1934
- 2 Lightwood, Reginald, and Hawksley, J C. *Proc Royal Soc Med* 27 255, 1934
- 3 Buhrman Wm L and Sanford Heyworth N. *Am Jour Dis Child* 41 226, 1931
- 4 Lippman, Hyman S. *Am Jour Dis Child* 27 473, 1924
- 5 Clifford, Stewart H, and Hertig, Arthur T. *New England Jour Med* 207 205, 1932
- 6 Hawksley, J C and Lightwood R. *Quarterly Jour Med Oxford* 3 137, 1934

MUNICIPAL CIVIL SERVICE COMMISSION NOTICE OF EXAMINATIONS

For Director of the Division of Psychiatry (Department of Hospitals, Bellevue Hospital) Open to all qualified citizens of the United States

Salary \$9,000 per annum, full time service pension fair sick leave

Ages Not more than 55 on Oct. 4 1935

Applications Received 9 a m, Wednesday, May 15 to 4 p m Friday, Oct. 4, 1935, Room 1400, Municipal Building Manhattan

Duties To have complete supervision of the Psychiatric Division of the Department of Hospitals with full clinical responsibility for the patients assist in and direct the commitment of mental and related cases to institutions, examine or supervise the examination of patients received from the police courts and probation bureaus supervise such wards and clinics as may be assigned to the psychopathic division in any department hospital or clinic, have general supervision of a mental hygiene and child guidance clinic, have assistants psychologists etc., supervise such as are assigned to the accordance with the do related work as required

Requirements Candidates must have had at least 10 years experience in the examination care and treatment of patients suffering from mental disorders of which at least five years must have been as a member of the clinical staff of a recognized mental hospital or as a member of the psychiatric staff of a general hospital with an organized psychiatric department or the equivalent. In the rating of candidates weight will be given personal qualifications for the position and to demonstrated clinical and administrative ability cognizance will be taken of membership in appropriate scientific societies Credit will be given for official or professional reports and original monographs directly related in character and importance to this position. The requirement that applicants must be residents of the State of New York is waived for this examination which is open to all qualified citizens of the United States. Persons who accept appointment must thereafter reside in the State of New York. Candidates must present their license to practice medicine on the day of the technical-oral test. Licenses to practice outside of New York State must be endorsed by the Board of Regents of the University of the State of New York before the names of the holders of such licenses will be certified for appointment. Candidates must also be registered as qualified examiners in accordance with section 19 of the Mental Hygiene Law before appointment.

Vacancies One in the Department of Hospitals

Subjects and Weights Experience weight 5 70 per cent required oral technical weight 5 75 per cent required 75 per cent general average required.

Fee \$9 to be paid before candidates will be admitted to the oral technical examination. Only one fee check money order or cash at Room 1438 where official

receipt will be given no fee for application. No refund of fee

For Associate Director of the Bacteriological Laboratories, Health Department

Salary \$6,000 per annum pension fair sick leave Ages Not over 55 on Oct 4 1935

Applications Received 9 a m Monday July 8, to 4 p m Friday Oct. 4 1935 Room 1400 Municipal Building Manhattan.

Duties To assist the Director in the executive supervision of the Bureau of Laboratories of the Health Department of New York City. The activities of this Bureau are as follows: Research studies of the treatment prophylaxis and diagnosis of infectious diseases and of biological therapeutic products improve methods in medical procedures used in infectious diseases, investigation of the researches of others routine examinations of clinical specimens for bacteriological diagnosis and of water, milk shellfish and other food to detect the bacterial contamination on routine preparation and distribution of biological products for therapeutic use, supervision of clinical laboratories operated under departmental permits. The staff of the Bureau consists of several Assistant Directors Inspectors Chemists Physicians Pathologists Veterinarians about 30 Bacteriologists 75 Laboratory Assistants 125 Laboratory Helpers and a miscellaneous force of Clerks and Laborers of about 50 Workers.

Requirements M D degree from an accredited institution and not less than five years of satisfactory experience in a bacteriological laboratory of recognized standing a considerable portion of which time must have been devoted to significant bacteriological or biochemical research and administrative duties of a character calculated to qualify the candidate for an executive position of this type, or a satisfactory equivalent of the foregoing.

The requirement that applicants must be residents of the State of New York is waived for this examination, which is to be open to all qualified citizens of the United States. Persons who accept appointment must thereafter reside in the State of New York.

Vacancies One in the Health Department

Subjects and Weights Candidates will be rated on the basis of their past professional history and an oral interview for those who meet the requirements set forth above. Only those attaining a rating of at least 75 per cent. will be placed upon the eligible list. Reprints of all published scientific work must be submitted with applications at the time of filing.

Fee \$6 to be paid at least five days prior to oral interview but after receipt of notice of examination date. Only one fee check or money order by mail or cash at Room 1438 until 4 p m Saturdays 12 noon where official receipt will be given no fee for application. No refund of fee.

MUNICIPAL CIVIL SERVICE COMMISSION

JAMES E. FINEGAN President, FERDINAND O. MORTON and SAMUEL H. ORDWAY, Jr. Commissioners

WILLIAM H. ALLEN Secretary

MEASLES PROPHYLAXIS

SAMUEL KARELITZ, M.D., *New York City*

Prophylaxis

Many attempts have been made to produce active immunity to measles in humans, but to date there seems to have been no practical method devised for its accomplishment on a large scale. Passive immunity to measles, effective for a short time, usually sufficient to withstand an exposure to the disease has been transmitted to humans successfully by the use of convalescent serum, immune adult blood or serum, and more recently globulin, extracted either from human placentas or from immune adult blood serum.

In the evaluation of any of these measles prophylactic measures the dosage depends on the consideration of several factors; these are the age, size, and physical state of the exposed individual, the duration and intimacy of the exposure, and the period which has elapsed since the first moment of the exposure. The age and period of exposure have been considered in most studies, but it has only recently been demonstrated that other conditions, the epidemiologic factors, were vital in evaluating a measles prophylactic measure. Thus we believe that hospitals, nurseries, schools, and so on are not suitable for measles prophylactic studies since under such conditions the degree of exposure of the children must vary and the certainty of exposure of all susceptibles can never be established. In studies conducted in homes¹ where the contact between the sick and susceptible children was intimate and long, the percentage of complete protections was smaller, unless the serum dosage was increased. We have also found that in homes where better hygienic conditions prevailed the serum used seemed to be more effective than in

homes of poor hygiene, but less effective than in hospitals, nurseries, and other such institutions.

It is evident that unless all of these factors are considered by all workers no uniform results will be obtained. The literature demonstrates just that. Except in the use of convalescent serum, the results are difficult to interpret in most reports.

Convalescent Serum

Convalescent serum, or that serum obtained 7 to 10 days after an attack of measles, was first used by Maggiore² in 1915, by Nicolle and Conseil³ in 1916, and by Park and Zingher⁴ in 1916. The results obtained by these workers and innumerable others, especially Degkwitz⁵ in thousands of cases were uniformly good. No ill effect has been reported. Were it not for the limited supply available we believe that convalescent serum is by far the choice measles prophylactic substance known today. An idea of the dosage employed can best be obtained from the recommendations in Table I.

With these doses at least 90 per cent of the exposed susceptibles are protected, if injected before the sixth day of exposure. For modification inject the above doses on the sixth or seventh days of exposure, or one-half to two-thirds of the above doses before the sixth day of exposure.

Most of the above authors performed their experiments in hospitals, and therefore the same dosages in homes may in some cases yield less satisfactory results. Park and Freeman¹², using 6 c.c. doses in homes, and Levinson¹³ using 5 to 7 c.c., respectively, obtained 52 per cent and 60 per cent protections as compared to over

TABLE I

DOSAGE OF CONVALESCENT SERUM FOR COMPLETE PROTECTION

		3 c.c.	3-10 yrs.	3-6 c.c.	Over 10 yrs.	8 c.c.
Debré ⁶	Less than 3 yrs.	3 c.c.	3-10 yrs.	3-6 c.c.	Over 10 yrs.	8 c.c.
Sinclair-Avery ⁷	Young children.	4 c.c.	Older	8 c.c.	Adults	10 c.c.
Park ⁸	Young children	5 c.c.	Older	10 c.c.		
Gunn ⁹	Young children	5 c.c.	Older than 3 yrs.	multiply age by 2 c.c.		
Joannon ¹⁰	Up to 3 yrs.	3 c.c.	Plus 1 c.c. for each additional yr.	(Maximum 15 c.c.)		
Silverman ¹¹	Up to 3 yrs.	3 c.c.	Plus 0.5 c.c. for each additional 6 months	Adults 20 c.c.		

From the Department of Pediatrics, Mount Sinai Hospital, New York City. Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 15, 1935

TABLE II

Cases	Dosage Adult Serum	Protected	Modified	Failed	Exposure
277	5-6 c.c.	22%	25%	53%	2-5 days
70	8 c.c.	46%	43%	11%	"
274	10-12 c.c.	49%	34%	17%	"
181	15 c.c.	51%			"
122	20 c.c.	65%			"
34	30 c.c.	82%	Data not published		"
28	40 c.c.	85%			"
14	50-100 c.c.	84%			"

90 per cent protections with the same doses in hospitals. We believe the dosages recommended by Gunn, or those of Silverman and Joannon perhaps the simplest to remember for protections with convalescent serum.

Immune Adult Blood or Serum

Immune adult blood was first used by Degkwitz¹⁴ and Rietschel¹⁵ in 1920 and 1921 abroad, and by Karelitz and Levin¹⁶ in 1925 in this country. Many of the results reported to date are confusing, the conditions of experimentation being inadequately stated. We have, however, collected those cases reported as having been treated under similar conditions in homes by various workers and have pooled the cases, including 400 of our own, to obtain some idea of the dosage.

In Table II data pertaining to infants exclusively were not included for obvious reasons.

As noted in the table the results with immune adult blood serum are good only if a minimum of 8 c.c. is used. It has been estimated by various authors that convalescent serum is 4 to 6 times as effective as is adult serum. The dosage of immune adult serum might therefore be taken as 4 to 5 times that of convalescent serum, depending on the size of the child. Accordingly we would recommend that for complete protection of children not over 3 years 12 to 15 c.c. and 4 to 5 cc. for each additional year, with a maximum dosage of 48 to 60 c.c. be used. If

modification is sought, one-half to two-thirds of this dosage might be given up to the fifth day or the entire amount on the sixth or seventh day of exposure.

Although these dosages seem large our own observations indicate that the failures in these studies are among older children who are given inadequate amounts of serum.

It is true that in many instances where modification is desired, complete protection will be obtained, if the above doses are used, but this seems to us to be more desirable than to get modification where complete protection is expected. We have observed that when 10 c.c. of adult serum or more is used, some degree of modification can be expected in well over 80 per cent of the cases. If whole blood is used, twice the amount of serum must be injected.

We have seen several reactions to adult blood. Local pain lasting for hours, local inflammation lasting for days, in two cases urticaria and in one child typical serum sickness with swollen knees. These have been the exceptions rather than the rule.

Placental Extract

Two years ago McKhann and Chu¹⁷ reported that globulin extracted from human placenta was effective in measles prophylaxis in almost 100 per cent of the exposed treated children. Under more critical conditions of experimentation we¹⁸ obtained less striking results. We

TABLE III

	Dosage	No. Cases	Protected	Modified	Failed
Morales & Mandry	10 c.c. A.S.*	138	40%	40%	20%
Karelitz & Schick	10 c.c. A.S.	70	42%	41%	17%
Authors	3.3-20 c.c.	74	38%	42%	20%
Placental Globulin Extract calculated to correspond to 10 c.c. of A.S.					

* Adult serum.

have, however, confirmatory evidence of the value of placental globulin extract. Our results have been compared to those obtained with 10 c.c. of immune adult serum and as can be seen in Table III were very similar.

By this method for determining the dosage of placental extract we arrived at 5 to 30 doses from a placenta, each equivalent to 10 c.c. of immune adult serum. Only two placentas yielded more than 17 such doses.

Our method of measuring the dosage of globulin extract is based on the following facts: first, the results which may be expected with immune adult blood serum are known; second, the globulin extract of the immune adult blood was shown¹⁹ to be equally effective in measles prophylaxis as the blood from which it was extracted, and third, evidence has been presented by McKhann and co-workers²⁰ and confirmed by us²¹ that the placental globulin extract prepared as noted in reference 17 contains both the diphtheria antitoxin and the measles antistubstance.

From the above facts we suggest that: (1) The amount of maternal serum which contains one unit of diphtheria antitoxin should be equivalent to the amount of placental globulin extract which contains one unit of diphtheria antitoxin. For example: blood serum obtained from a woman in labor contains 0.05 units of antitoxin per c.c. The globulin solution extracted from her placenta contains 0.10 units per c.c., or twice the titre of maternal serum. One c.c. of blood serum is therefore the equivalent of 0.5 c.c. of the placental globulin extract in regard

to diphtheria antitoxin. (2) If this same equivalent can be assumed for measles prophylaxis, and that is our hypothesis, we should be able to calculate the dosage as follows: Let us assume that 10 c.c. of the blood serum is the dosage the equivalent of which we wish to calculate in terms of placental globulin extract. In the case, exemplified, since the diphtheria antitoxic titre of the extract is twice that of the blood serum we would use half, or 5 c.c. of the globulin extract. In other words our hypothesis is that the measles prophylactic value of that amount of human blood serum which contains one unit of diphtheria antitoxin and the amount of placental globulin extract which contains one unit of diphtheria antitoxin should be equal.

Table IV illustrates how we arrived at dosage with 10 different placental globulin extracts, and as mentioned before, our results so far indicate that this method is, with some exceptions, practicable and correct. Many of our reports are still incomplete. Further data on the subject will therefore be presented at a latter date. We are now testing 20 such extracts.

The work of McKhann and our studies have definitely shown that placental extract has its place in measles prophylaxis.

Reactions to Globulin Extract

Of 64 cases injected with placental globulin extract 30 had no reactions, 34 had reactions. Twenty-one of these had mild to moderate pain at the sight of injection. Five had severe local pain for several hours followed by lameness and

TABLE IV

Placenta	Globulin Extract		Diphtheria Antitoxic Titre			Measles prophylaxis dose BA times 10
	Quantity	Nitrogen Mgms. %	A—Extract units c.c.	B—Mat. serum units c.c.	Nitrogen Mgms. %	
1.	100 c.c.		.05 units	.05 units c.c.	2.48	10 c.c.
2.	"		.06 "	.09 "	2.48	15 c.c.
3.	"		.03 "	.04 "	2.44	13.3 c.c.
4.	"	3.72	.01 "	.02 "	1.92	20 c.c.
5.	"	2.67	.03 "	.03 "	1.37	10 c.c.
6.	"		.19 "	.11 "	1.57	5.7 c.c.
7.	"		.03 "	.02 "	1.83	6.6 c.c.
8.	"	2.56	.06 "	.05 "	1.98	8.3 c.c.
9.	"	3.75	.33 "	.11 "	2.28	3.3 c.c.
10.	"		.15 "	.06 "	2.18	4 c.c.

The dosage of globulin extract is calculated to compare with 10 c.c. of immune adult blood serum. If the comparison were to be made with a different quantity (X) of blood serum the calculation would be B/A times X, instead of B/A times 10, as above.

local tenderness for about 24 hours, and 8 children had local pain plus temperature of 101 to 103° lasting 12 to 18 hours. Many of these children became pale, had nausea and headache for a short time after the injection. Febrile reactions have been less common but not rare. One allergic child developed an attack of asthma and 103° temperature, two others developed urticaria locally. Perhaps substance to which these children were sensitive were introduced. Just what the cause of these reactions might have been is questionable, several possibilities exist for their explanation. It is noteworthy that with the same extract some children had no reactions at all, whereas others suffered considerable discomfort.

Purification of the extract is rewarded by less reactions, but it also brings about a loss of a considerable part of the immune substances.

Adult Serum Globulin

The use of the globulin extract of immune adult blood has been found effective in measles prophylaxis. Its value lies in the possibility of reducing the volume of the injection to a minimum, perhaps as little as 1 c.c.

Placental Fluid

Experimental work reported by us²² elsewhere has led to the possibility that the sanguineous fluid obtained by squeezing the placenta may be effective in measles prophylaxis in the same dosage as is immune adult blood serum. Practical testing of this is now in progress and will be reported upon later.

Discussion

From the data presented it is clear that our choice measles prophylactic measure, aside from ordinary hygiene, is convalescent serum, whenever it is available. At present immune adult blood serum is perhaps preferable to globulin extracts, but we believe that as the work proceeds the effect of globulin extract will be better known, reactions from it will be eliminated by refinement. It will then offer a more certain prophylactic measure than does adult blood. The same possibilities exist in the use of globulin extract of adult blood and the placental fluid. It is our opinion that in the use of globulin

extract of placenta, globulin extract of immune adult blood serum, or placental fluid we are treating with the same active substances whose common source is immune adult blood. What, therefore, are the advantages of using any of these products instead of adult blood? These substances can be concentrated to small volumes, they are available in ampoules to those children whose parents have not had measles, they can be transported, and for a limited time stored to meet an impending epidemic of measles, it can be supplied through serum distributing centres, and the occasional transmission of disease via the blood injection can be avoided, and finally it is inexpensive and placentas are easily obtained.

Modified Measles. We would recommend that in children under 3 years of age, and all others who are suffering from tuberculosis, pulmonary disease of any kind, otitic or paranasal sinus infections, pertussis, and other acute contagious diseases, attempt be made for complete protection, whereas in older well children modification of the disease be attempted. In institutions complete protection should always be strived for to stop the epidemic.

The modified measles is often indistinguishable from an attack of mild measles, but usually a more bizarre picture is presented. The incubation period may be prolonged, prodromata may be absent or very mild, the enanthem may be absent and in some is represented by what appears to be follicular tonsillitis, the Koplik spots may be present or absent, coryza and photophobia may be mild or absent, the rash may be scant and spotty, or very intensive, but unlike ordinary measles, the child is not drowsy and seems quite well at this stage. The temperature may be 100-101° for a few days and in some cases reaches 103° or 104° for one day. Complications are reduced to a minimum, 1 to 2 per cent.

This modified measles is most desirable, especially because it seems to produce adequate immunity to withstand subsequent exposures. We know of only one certain case of modified measles in a child who developed ordinary measles one year later.

In the event that complete protection is attained, how long does this immunity

have, however, confirmatory evidence of the value of placental globulin extract. Our results have been compared to those obtained with 10 c.c. of immune adult serum and as can be seen in Table III were very similar.

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The work of McKhann and have definitely shown that plac tract has its place in measles prop.

Reactions to Globulin Extra

Of 64 cases injected with placel. globulin extract 30 had no reactions, 3 had reactions. Twenty-one of these had mild to moderate pain at the sight of injection. Five had severe local pain for several hours followed by lameness and

TABLE IV

Placenta	Globulin Extract		Diphtheria Antitoxic Titre		Nitrogen Mgms. %	Measles prophylaxis dose BA times 10
	Quantity 100 c.c.	Nitrogen Mgms. %	A—Extract units c.c.	B—Mat. serum units c.c.		
1.	"		.05 units	.05 units c.c.	2.48	10 c.c.
2.	"		.06 "	.09 "	2.48	15 c.c.
3.	"		.03 "	.04 "	2.44	13.3 c.c.
4.	"	3.72	.01 "	.02 "	1.92	20 c.c.
5.	"	2.67	.03 "	.03 "	1.37	10 c.c.
6.	"		.19 "	.11 "	1.57	5.7 c.c.
7.	"		.03 "	.02 "	1.83	6.6 c.c.
8.	"	2.56	.06 "	.05 "	1.98	8.3 c.c.
9.	"	3.75	.33 "	.11 "	2.28	3.3 c.c.
10.	"		.15 "	.06 "	2.18	4 c.c.

The dosage of globulin extract is calculated to compare with 10 c.c. of immune adult blood serum. If the comparison were to be made with a different quantity (X) of blood serum the calculation would be B/A times X, instead of B/A times 10, as above.

BURNING TONGUE

Glossodynia

HOWARD FOX, M D, *New York City*

The term 'burning tongue' is synonymous with glossodynia and glossopyrosis. It refers to subjective symptoms which are usually described as burning, though at times stinging, boring, or even itching. Some patients speak of soreness of the tongue. As a rule no pathologic changes are visible even with the aid of a magnifying glass. The abnormal sensation usually affects the tip, or one or both sides of the anterior two thirds of the tongue. The burning sensation is usually more or less continuous. It does not occur in severe paroxysms which are characteristic of neuralgia and it does not interfere with sleep as a rule. The pain is apt to lessen or disappear temporarily when eating. Some complain of a swelling of the tongue which is however not apparent to the examining physician. The salivary secretion in some patients is increased and in others is said to be decreased. The disease is chronic and often rebellious to treatment. The majority of patients are middle aged women who often show a decided neurotic tendency.

The term glossodynia does not include pain or other abnormal sensation arising from organic lesions of the tongue due to syphilis, tuberculosis, traumatism, drugs, leukoplakia, and many other affections. Glossodynia is also to be distinguished from Moeller's glossitis, Prinz¹ stating that it bears no relationship to this disease. The bright red, sharply defined patches of Moeller's glossitis, with absence of fur on the tongue and frequent association with pernicious anemia, are sufficient for differentiation.

Glossodynia should be differentiated from glossalgia or true neuralgia of the lingual branch of the fifth nerve (or possibly the glossopharyngeal nerve). Rosenberg,² in his inaugural dissertation, distinguishes true neuralgia from what he calls hysterical pseudoneuralgia (glossodynia) as follows:

True neuralgia occurs more commonly

in men than in women, there is usually a history of some definite injury, the pain follows the course of the nerve, it is definitely paroxysmal in character and there are painful points of pressure along the course of the nerve. Glossodynia on the other hand occurs much more often in women, a definite cause is usually not found, the pain does not correspond to the anatomical relationship of the nerve and paroxysms are rare.

The etiology of glossodynia has been the source of widely divergent opinions. Berberich³ says it is doubtful whether glossodynia represents a disease *sui generis*, an opinion with which I fully concur. Many investigators have considered the affection to be of psychic origin. Castex⁴ in his excellent thesis in 1921 concludes that burning tongue is an incipient form of hysteria and adds that autosuggestion in a neuropathic individual is of prime importance in causation. In a recent symposium on burning tongue held at the New York Dental Centennial, Dr S G Burchell, possibly speaking from the standpoint of a psychiatrist, expressed the view that the disease was probably a manifestation of hysteria. The psychic element has also been stressed by Engman⁵ in a report of 11 cases of burning tongue. Nine of his patients were middle-aged women, all of whom suffered from cancerphobia.

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- 1 Pernicious or simple anemia
- 2 Disturbance of gastric secretion
- 3 Psychic disturbance
- 4 Cases in which oral causes predominate

In addition to anemia, especially of the Addisonian type, pain or other subjective symptoms in the tongue may occur in leukemia. In any case of burning tongue, the blood should be examined to exclude these diseases.

Abnormal gastric secretions are con-

last? We have seen some children who were protected, develop modified measles after another exposure two weeks later. On the other hand we have had some who withstood re-exposure to measles 4 and 6 weeks later. We have seen on two occasions what seemed to be markedly modified measles almost a year later. We believe that in some degree the duration of passive immunity will depend on the amount of substance injected. In the case of the newborn, for example, its immunity to measles persists for 3 months or longer, probably because all of its blood and tissue fluids represent passive transmission of antibodies on a large scale.

Modified measles is often indistinguishable from mild measles. Statistical studies based on such criteria may, therefore, be misleading. In the evaluation of a serum we believe complete protections are more important, for it is well known that in intimate exposures such as is the case in private homes from 80 to 100 per cent of the susceptible contacts will de-

velop measles. Morales and Mandry²³ reported that of 183 control cases only 18.6 per cent failed to contract the disease.

Conclusions

(1) Convalescent serum is the choice measles prophylactic measure. Its dosage under given conditions is discussed.

(2) Adult blood or serum in proper dosage is likewise effective and is practicable. Our results and those of other workers with various dosages are collected and tabulated.

(3) Placental globulin extract is also effective, but the reactions to it may be severe, and proper dosage must be employed, to get results.

(4) A method of measuring the dosage of globulin extract is described, and evidence of its successful application is offered.

(5) Other possibilities for measles prophylaxis are mentioned.

1097 PARK AVENUE

References

1. Karelitz, S., and Schick, B.: *J.A.M.A.* March 23, 1935.
2. Maggiore, S.: *Ped.* 29:873, 1921.
3. Nicolle, C., and Conseil, E.: *Bull. et Mem. Soc. Med. de Hop. de Paris* 42:336, 1918.
4. Zingher, A.: *J.A.M.A.* 82:1181, 1924.
5. Degkwitz, H.: *Ztschr. f. Kinderh.* 25:134, 1920.
6. Debré, R., and Joannon, P.: *Rev. d'hyg. Paris* 45:705, 1923.
7. Sinclair, A., and Avery, S. D.: *Military Surgeon* 55:698, 1924.
8. Park, W. H.: *Proc. Internat. Conf. Health Probl. Trop. Am.* 1:908, 1925.
9. Gunn, W.: *British M. J.* 1:183, 1932.
10. Joannon, P.: *J. med. Franc.* 20:159, 1931.
11. Silverman, A. C.: *J.A.M.A.* 91:1786, 1928.
12. Park, W. H., and Freeman, R. Jr.: *J.A.M.A.* 87:556, 1926.
13. Levinson, S., McDougal, C., and Thaling, W.: *Ill. M. J.* 63:258, 1933.
14. Degkwitz, R.: cited by Rietschel.
15. Rietschel: *Ztschr. f. Kinderh.* 29:127, 1921.
16. Karelitz, S., and Levin, S.: *Am. J. Dis. Child.* 3:408, 1927.
17. McKhann, C. F., and Chu, F. T.: *J. Infect. Dis.* 52:268, 1933.
18. Karelitz, S., Greenwald, C. K., and Klein, A. J.: *Proc. Soc. Exp. Biol. & Med.* May, 1935 (in press).
19. Karelitz, S.: *Proc. Soc. Exp. Biol. & Med.* 31:793, 1934.
20. McKhann, C. F., and Coade, H.: *South. Med. J.* 27:20, 1934.
21. Cf. reference 18.
22. Karelitz, S., and Greenwald, C. K.: *Proc. Soc. Exp. Biol. & Med.* May, 1935 (in press).
23. Morales, E. G., and Mandry, O. C.: *Bol. Assoc. med. de Puerto Rico* 22:217, 1930.

MOTHER'S MILK FOR HEMORRHAGE

Mother's milk has a very special power to hasten the clotting of blood and therefore to control hemorrhage or bleeding. Prof. A. Solé reported recently to the Vienna Association of Physicians, says the *Science News Letter*.

Curiously enough, animal milk does not have the same power to clot blood nor does human milk. The preparatory milk secreted by mammary glands during the first day or two after the birth of a baby.

If the milk destroys the blood-clotting property, as the active substance,

whatever it may be, cannot withstand heat. The human milk may be dried and an extract of the powder used to check bleeding. This extends its usefulness, since a supply can be kept on hand for use when fresh human milk is not available.

Doctor Dafoe has ordered changes in the diet of the little Dionnes who, he says, are getting too fat. Maybe the doctor got stream-lining notions in New York.—*Arkansas Gazette*.

BURNING TONGUE

Glossodynia

HOWARD FOX, M.D., *New York City*

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The term glossodynia does not include pain or other abnormal sensation arising from organic lesions of the tongue due to syphilis, tuberculosis, traumatism, drugs, leukoplakia, and many other affections. Glossodynia is also to be distinguished from Moeller's glossitis, Printz¹ stating that it bears no relationship to this disease. The bright red, sharply defined patches of Moeller's glossitis, with absence of fur on the tongue and frequent association with pernicious anemia, are sufficient for differentiation.

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At the above mentioned symposium Dr. Joseph Schroff (an oral surgeon) favored multiple causes, grouping them in the following four classes:

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Abnormal gastric secretions are con-

sidered by Morelli⁶ to be the cause of glossodynia. This is due in his opinion to reflex action caused in most cases by hyperacidity as previously shown by Sellei. In Morelli's experience the disease was also due at times to gastric hypo- or anacidity. By appropriate treatment the tongue manifestations were permanently relieved. Local treatment he believed to be illogical and entirely without benefit.

The rôle of local irritants, exclusive of organic disease, is difficult to determine. While hot or highly spiced foods, tobacco, ill fitting dentures or jagged teeth may aggravate the condition they do not often seem to be its exciting cause. The effect of a galvanic current between dissimilar metals has been studied particularly by Everett S. Lain.⁷ Burning tongue was one of the conditions which he proved to be caused in this manner. Similar cases have been recorded by Hollander and very recently by Rattner.⁹ Sluder¹⁰ states that he has often observed glossodynia to be secondary to a lingual tonsillitis though the relationship does not appear to be clear. He has reported cures in some of these cases by cocainization of the sphenopalatine (Meckel's) ganglion.

Dietary deficiency (probably vitamin) is thought by Dr. Henry J. Spencer to be the usual if not invariable cause of burning tongue, his ideas on this subject, from the standpoint of an internist, having been expressed at the aforementioned symposium. "This symptom," he writes, "is evidence of a deficiency common to pellagra, sprue and pernicious anemia but occurring in many other persons whose dietary is deficient because of some demonstrable factor, personal or environmental. Thus the person who is placed on a limited diet, e.g., for peptic ulcer, diabetes, and the like; or the alcoholic addict who fails to eat a proper diet or enough of one; the neurotic who eats unwisely or scantily; the person with dental problems and hence problems of mastication which lead to dietary curtailments; the overfatigued or harassed individual whose appetite fails him—all present situations where deficient food supplies may bring on trouble. The argument in most of these cases is direct and clear."

Spencer states that he has observed a few score of cases, mostly women in out-

patient clinics including diabetic, chronic alcoholic, gastro-intestinal, and hematological. He reports excellent results from parenteral injections of liver extract.

Analysis of Cases

In the past seven years the author has had occasion to observe in private practice, 14 cases of glossodynia. In nearly every case, the term "burning" of the tongue was used by the patient to describe the disease. Of these cases 8 were women and 6 were men; a rather high proportion for the latter sex. Four of these were housewives, 4 were business men, and 6 were members of some profession including 2 physicians. Their ages varied from 33 to 68 years, the average being 49. The location of the painful sensation in 11 cases was confined to the tip or to one or both borders of the anterior half of the tongue. In 3 cases the dorsum alone was affected.

Of the 14 cases, 10 showed no demonstrable lesions of the tongue. In 2 cases there was a deep central furrow on either side of which the burning sensation was situated. In one case there was a pea-sized area which was somewhat redder than the rest of the tongue and in another case the fungiform papillae were redder than normal and slightly swollen. In 4 cases the tongue was coated.

The duration of the pain varied from 3 weeks to 5 years, the average time being a year and a half. The pain (or burning sensation) in 7 cases was more or less continuous. In one case there were morning remissions and in 2 cases the pain was somewhat paroxysmal though never sufficient to interfere with sleep.

In 12 cases the question was asked whether the pain was worse after eating or drinking. In 6 cases no difference was noticed and in 6 other cases it was more or less increased after eating or drinking. In one case the pain became worse after prolonged talking. Of 6 patients who were accustomed to take highly seasoned or very hot food, in only one was the condition worse after this indulgence.

Alcohol apparently played an unimportant rôle in these patients, 6 of whom took none whatever, 3 almost none, while 2 drank very moderately. Only one patient stated that the affection was worse after the use of alcohol.

As to tobacco, 6 patients did not smoke at all, 2 smoked very slightly and one moderately, while 4 were inveterate smokers. In only 2 cases was there any apparent aggravation from the use of tobacco. One patient stopped smoking entirely for 6 months which resulted in an apparent cure. At the end of this period he began to smoke again but in spite of this the burning sensation did not recur.

The condition of the teeth was noted in 13 cases. This was excellent in 8 patients, none of them having teeth with jagged edges, though all had some fillings and a few had capped or missing teeth. In one case all the teeth had been removed, the plates not fitting well, due to shrinkage of the gums. In one patient there was an upper denture with numerous false teeth and in another all the upper teeth were missing. One patient showed a few jagged teeth which however were not in anatomical relation with the affected part of the tongue. In one case 9 teeth had been capped, the metals consisting of gold and amalgam only, which his dentist thought had no relationship to the burning tongue. In one case all fillings except those of gold were subsequently removed without relieving the burning tongue. In this case the possibility of galvanic burns was eliminated. Notes regarding the type of dentifrice used were made in 11 cases. Practically all used well known standard preparations either in the form of tooth pastes or tooth powders.

Notes concerning indigestion were made in 13 cases, this being absent in 6 of them, one of whom had previously had a complete roentgenologic gastrointestinal series. Of the remaining 7 patients, indigestion of varying degree was present at the time of examination or had previously been present. One patient had also had a spastic colitis with subsequent attacks of diarrhea.

Constipation of varying degree was complained of by 4 patients while 7 were entirely free from this condition.

In only one patient was there a history of irregularity of menstruation. One woman was going through the climacteric, and two had long since passed this period.

Blood counts, unfortunately, were taken in only 5 cases, in one of which

there was a mild simple anemia, the blood picture in the others being normal.

Notes regarding the mental condition were made in 9 cases. This was apparently normal in 2 cases while in 7 patients there was marked evidence of "nervousness." Several patients stated that they were "born worriers." There were, however, only two who had definite cancerphobia. One of these was a man in whom a papilloma of the tongue had been previously removed.

The general health was apparently excellent in 10 patients, fair in one, and poor in 3 of them.

Treatment consisted primarily in assuring the patient that the disease had no relationship whatever to cancer. Instructions were given to stop the use of tobacco, alcohol, highly spiced food and excessively hot food or drink. A diet of plain food was ordered and suggestions for the relief of constipation were given. No examination of gastric contents was made.

The teeth were in good condition in the majority of cases but the possibility of galvanic currents being causative was excluded in only 2 cases. All of the patients were given a mouth wash of tincture of myrrh and boric acid.

As the neurotic element seemed to be conspicuous in a majority of cases, roentgen rays were tried as a placebo, unfiltered fractional doses being given at weekly intervals to the affected part of the tongue. The results were most gratifying in two cases in which the burning sensation disappeared completely after several treatments and had not recurred at the end of seven, and two and one half years, respectively. Roentgentherapy was also followed by great improvement in 2 cases and by moderate improvement in 3 cases. In 2 cases, after 2 and 3 irradiations, respectively, no change whatever was noted. It is entirely possible that the few favorable results which followed roentgentherapy were due to autosuggestion. As mentioned above, complete cessation of smoking resulted in apparent cure in one case.

Comment

The subject of burning tongue has been brought to your attention, as its causation has often seemed to be obscure.

and its treatment unsatisfactory. Although it is a subject of importance it has not attracted sufficient attention among dermatologists.

In the author's limited experience the disease appeared most often in persons of neurotic type and in these cases roentgentherapy was of considerable value. Among local irritants tobacco, alcohol, and rough or jagged teeth did not appear to be of great importance although in one case an apparent cure followed complete cessation of smoking.

Burning tongue is certainly not a disease *sui generis* but may result from widely different causes. These include abnormal mentality, blood diseases, especially pernicious anemia, gastrointes-

tinal disorders, dietetic deficiencies, and local irritation. Among local irritants, the action of galvanic currents arising from dissimilar metals has been proven to be the cause of some cases of burning tongue.

140 EAST 54TH STREET

NOTE: A few hours before the presentation of this report, word was received that one patient in this series is now under treatment for pernicious anemia. This was a neurotic woman 68 years old who had suffered from burning of the tip and sides of the tongue for one year. All her teeth had been previously removed. There were no visible pathologic changes in the tongue and a blood count was not made. This case illustrates the necessity for blood examination in every case of burning tongue.

References

1. Prinz, Herman: Chronic Superficial Erythematous Glossitis (Moeller's Glossitis), *Dental Cosmos*, May 1928.
2. Rosenberg, Michael: Diagnose der Hysterischen Pseudoneuralgien mit besonderer Berücksichtigung der Glossodynia, Inaug. Dissertation, 1908.
3. Berberich, J.: Lehrbuch der Mund und Rachenkrankheiten, *Thieme, Leipzig*, p. 542, 1932.
4. Castex, Louis: Des Glossodynies et la Syndrome de la langue brulante (burning tongue) *These de Bordeaux*, 1921.
5. Eneman, M. F.: Burning Tongue, *Arch. Derm. & Syph.* 1:137, 1920.
6. Morelli, Gustav: Relfektorische Überempfindlichkeit der zunge (Hyperaesthesia reflectorica linguae), *Zeitschrift für stomatologie* 26:692, 1928.
7. Lain, Everett S.: Chemical and Electrolytic Lesions of the Mouth Caused by Artificial Dentures, *Arch. Derm. & Syph.* 25:21, 1932.
8. Hollander, Lester: Galvanic Burns of the Tongue, *J.A.M.A.* 100:1029, 1933.
9. Rattner, Herbert: Burning Tongue, *Arch. Derm. & Syph.* 31:701, 1935.
10. Sluder, Greenfield: A Case of Glossodynia with Lingual Tonsillitis as its Etiology: Control through the Nasal Ganglion, *J.A.M.A.* 81:115, 1923.

A MEDICO-SOCIAL CLUB FOR ALL THE FAMILY

A social club in London which also provides health examinations is reported in the London letter in the *A. M. A. Journal*. It seems that three years ago, operations were begun by inviting families in the neighborhood to join a family club at a subscription of 12 cents a week per family. They were offered in return a periodic medical examination but no treatment. If and when necessary a note with the diagnosis was given the member for the family physician or for hospital treatment. In addition, members had the use of the club daily from 2 to 10 p.m. for social purposes. The experiment was so successful that it has been transferred to a much larger building, standing in a large area of grounds, designed for the purpose. This is neither a commercial venture nor a charitable institution. It is in charge of two physicians who have made a special study of family health and who will be aided by voluntary workers.

The subscription is now 24 cents a week for each family, but much more is offered than the periodic examination—a swimming pool, gymnasium, boxing and dancing halls, cafeteria and library. There will also be a crèche, with room for perambulators, sewing machine room, a social club for mothers, garden space for games, infant solarium, lecture rooms and reading cubicles. The building has been designed for 2,000 families, and with a calculated revenue of \$50,000 it is thought that the cost of the building will be paid in thirty-five years. It is claimed that a periodic examination by the same physician results in a saving of 90 per cent of the serious cases among his patients. The unit of membership is the family as a whole, for it is held as a fundamental principle that physicians can only thus hope to acquire a full knowledge of the health of the individual.

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EDITORIALS

Unsuitable Advertising Copy

The Board of Trustees of the A.M.A. gave deserved prominence in its Annual Report to the use of the word "Doctor" for advertising purposes. In the past few years advertising copywriters have made a cheap adjective of this honored and significant title of accomplishment. Shoe manufacturers, in particular, have made the term their own; and numerous brands of footgear sport the name of an imaginary physician or carry some sweeping medical designation, although no doctor is connected with their manufacture and no specific medical principles enter into their construction.

The purpose of this doctorate title is naturally to give the impression that the shoe is built under medical supervision and is designed to remedy common foot ailments. This is definite misrepresentation—no less heinous for its indirection—and steps should be taken promptly to put an end to such fraud.

In New York State the Medical Practice Act forbids anyone but a licensed physician or osteopath to use the doctorate title in connection with any phase of healing. This prohibition should apply to corporations and commodities no less than to individuals; and if a liberal interpretation of the existing law does not suffice to interdict abuses, new legislation should be promptly introduced.

A good shoe does not need chicanery to promote its sale. Neither does any other worthwhile product. The term "doctor" has a special significance in health, the preservation of which is essential to protect the public against charlatanry.

A Medical Instrument

A hundred dollars is a lot of money for a toy—particularly a dangerous one—but with the aid of high powered advertising over the radio and through the mails the sale of high frequency instruments for self-treatment continues to flourish. Although these small machines are of no therapeutic value and serious accidents may result from their use in inexperienced hands, a growing number of sales concerns and "diathermy institutes" are putting them on the market with promises of relief from a long list of ailments.

As long as exaggerated and misleading claims for these sets continue to be made over the radio, credulous people will be found to sink a hundred or a hundred and fifty of their hard earned dollars into them. Unfortunately, the control of radio broadcasting is still in a highly nebulous state. While some of the larger companies voluntarily delete glaring misstatements from advertising issuing from their studios, many of the smaller stations are conscienceless in their need for commercial programs.

Organized medicine has issued several warnings to the public on the dangers of unsupervised physical therapy. The layman is not competent to make his own diagnosis or employ a powerful modality safely—beside which the small machines sold for self use are notoriously inefficient.

Considering all the possibilities of harm, this is too serious a matter to be left either to the scrupulousness of advertising media or the discretion of the public. There is no more justification for the unregulated sale of high frequency apparatus to the public than of hypodermic needles or powerful drugs.

Malpractice Insurance Changes

The committee on insurance, alert to developments in the field of insurance in general and of malpractice insurance particularly, came before a special meeting of the executive committee and made a report which appears elsewhere in our columns.

The committee reported that the Aetna Company with which our society has had contract contemplated a raise in premium rate which in its opinion was unjustified by its judgment of actuarial experience. The executive committee, after a thorough study of all angles of the matter presented, resolved to sever relations with the Aetna, and authorized the proper authorities to enter into negotiations with others, to the end that our members' interests be safeguarded, without imposing an additional financial burden on them. Eventually it is predicted that it will be possible to lessen the costs of this insurance to our membership.

It is proper, at this time, to say that the Aetna has been most scrupulous in carrying out every written or implied obligation it undertook to our membership, and it is meet that we publicly express our thanks and appreciation for the services rendered.

Mr. Lorenz J. Brosnan, who so ably serves us as counsel, and Mr. Thomas H. Clearwater, who is our attorney, will continue with us in the same position in the new set-up when it is accomplished. Mr. Harry F. Wanvig, our authorized in-

demnity representative, continues with us as heretofore. We shall inform all concerned of further developments when details are available. Nothing in the present status changes the existing relationships under pending contracts.

An Added Step in County Society Activities

A report from the Committee on Economics was recently the subject of a referendum vote taken by the Executive Committee. The basis of the vote lay in the fact that the federal government is bringing its activity in medical relief to a close.

The New York State Emergency Relief Law (Wick's Law) remains in effect. The federal activity becomes purely a work program with medical care only incidental to a casualty incurred by employment. The State Emergency Relief Agency carries on as heretofore. In regard to the work program, those who are injured or who become sick have heretofore been beneficiaries under the United States Federal Employees Compensation Law. The administration of this medical service will be delegated to a State authority.

The Executive Committee referendum vote means that the set-up which has been so thoroughly worked out by the various county societies under the supervision of the State Society in forming panels of men competent to do compensation work under the new Workmen's Compensation Law, will take over and treat the disabilities incurred in the course of employment by persons either working on projects for the federal government, or coming under the medical supervision of the State Emergency Relief Agency.

In our columns elsewhere appear the propositions voted on by the Executive Committee, and those interested are referred to this.

Here, we wish simply to call attention to the fact that the State Society has approved an effort to establish care for the poor at general public tax expense, maintaining the principle of free choice of

physicians from the panel made up by the County Medical Societies, and providing for fair and proper compensation to the physicians who render such professional service.

Vacant Medical Positions

It seems strange from the reports coming to us from the Municipal Civil Service Commission that there are not more applicants for the position of the Director of Psychiatry at Bellevue Hospital, New York, which carries an adequate salary; and also for the position of Associate Bacteriologist in the Health Department of New York City. Evidently, the kind of men who would apply for it, actuated by the salary, are not the type of men who could take the examination and fill the other requirements.

It is not our purpose to comment further on the matter, except to call attention to the fact that there are these vacancies, and that those who feel competent to fill them should avail themselves of the opportunity. Here are careers for fine physicians with a living wage. It is hoped that the great competition will result in good appointments.

Bronchial Asthma

The therapeutic problem presented by bronchial asthma is still far from complete solution. In a certain percentage of cases, the allergist is able to isolate the specific causative agent and afford relief to the sufferer. In others, despite all efforts directed toward the discovery of the etiological factor, no symptomatic cure is obtainable, even though it is definitely known that the essential cause of bronchial asthma is a spasmodic contraction of the bronchial musculature. It seems possible that the hitherto accepted data concerning the mechanism of bronchial muscle innervation may have contributed in no small degree to the large number of failures in the treatment of this disease.

It has been generally conceded that the vagus nerve controls the constrictor action

of the bronchial muscles while the sympathetic nerves regulate their relaxation. Until now, the only experimental work in support of this view is that of Brodie and Dixon¹ who were able to produce contraction of the bronchial muscles in animals by stimulation of the vagus nerve. Against their findings is a vast amount of clinical observation concerning the function of the vagus innervation to the lungs. In the second stage of tuberculous meningitis, wherein the tenth nerve is excited by the surrounding exudate, spasmodic breathing as occurs in asthma has never been observed; on the contrary, the respirations are full and deep. Then again, in the course of an operation upon the esophagus, wherein the vagus nerve is irritated by handling, a slowing of the heart rate is noted but never has there been observed an attack of paroxysmal breathing. Furthermore, it is Fraser's² contention that where a structure has a dual involuntary nerve supply, the phylogenetic constrictor function is maintained by the sympathetic, while the parasympathetic nerve invariably exercises an inhibitory influence. Finally, Brodie and Dixon themselves concede the presence of dilatory fibers in the vagus supply to the lung.

From this theoretical and clinical evidence, Levin³ believes that the dorsal sympathetic nerves, from the second to the sixth inclusive, contain contractor fibers to the bronchial muscles. He contends that it is an irritation of the sympathicus in this area which is responsible for the production of a bronchial asthma. Although his publication, at first glance, would seem to advocate the surgical procedure of dorsal sympathectomy for the relief of bronchial asthma, he reports excellent results by the less drastic means of injecting the dorsal sympathetic ganglia with alcohol. His conclusions are impressive. Of twenty-

¹ Brodie and Dixon: *Brit. Med. Jour.* July 13, 1929.

² Fraser: *Brit. Med. Jour.* p. 359, Feb. 27, 1926.

³ Levin, G. L. L.: *Ann. Surg.* 102:161, Aug. 1935.

three cases of intractable asthma treated by him in this manner, 75% obtained a symptomatic cure.

The findings of Levin must, of course, be substantiated by others before its therapeutic efficacy can be advocated. Nevertheless, the high percentage of his favorable results in cases of bronchial asthma which did not respond to other forms of treatment gives fair promise of an additional aid to our therapeutic armamentarium.

Tobacco and Thromboangitis Obliterans

The marked advance in the laboratory methods of diagnosis within the past two decades, in many ways, has to some extent overshadowed the astute clinical observations of the average practitioner in medicine. While the lay press deplores the passing of the "family doctor," with his keen insight and clinical intuition, the medical fraternity calmly sits by and uses the progress achieved in both the clinical and the experimental branches of medicine.

Every doctor is repeatedly questioned concerning the advisability of smoking. Most of us are smokers and consequently are apt to be swayed by our emotional viewpoint when answering this question. Many of us are aware of the particular sensitivity of certain individuals to tobacco. Ocular, cardiac, and gastric phenomena which are the direct result of tobacco smoking are not uncommon occurrences in our daily practice. After having discounted all the popular aversions to the use of tobacco, the doctor must eventually take refuge in the reports of competent scientific observers.

In ten years' of experience in the treatment of thromboangitis obliterans, Silbert¹ states that no such disease has occurred in a non-smoker in over 1,000 cases which have come under his observation. Furthermore, he says that the progression of the disease can be halted by the elimination of tobacco. In 309

patients, whom he observed for from two to ten years, no recurrence of symptoms were noted because total abstinence from the use of tobacco was advised because of their ailment. In those cases where a relapse occurred, with or without ulcer formation, the patients readily admitted a resumption of tobacco smoking. Silbert feels that despite the acknowledged susceptibility of certain individuals to the alkaloids of tobacco smoke, the role of this agent per se cannot be overlooked as the etiological factor in the production of thromboangitis obliterans. His successful results in the treatment of this disease by the administration of hypertonic saline intravenously have been noted only in those cases wherein patients have forsaken the use of tobacco. In contrast to the general conception of this disease, Silbert states that this affliction is not a progressive one provided the use of tobacco is discontinued.

CURRENT COMMENT

THE *London Times* of July 21st, commenting on the future era in medicine, says that there will come a time when doctors will cease to be private practitioners and will become officials and contract workers. This was foreshadowed by a speaker at the British Medical Association annual representative meeting in London recently. He was opposing a proposal that in any area where circumstances demanded it, local practitioners as a body should be allowed to set up a medical service on an insurance basis for persons having incomes above the national insurance level, and he said that if such services become general, it would be possible for all classes of people to insure against ill health. Further, "it has been said that contract practice is coming. If it does, there will be no more private practice left. You will be officials and contract workers."

OF ALL THE PEOPLE who lend themselves to fraudulent advertising and fraudulent cures, the deafened are the most gullible. The Bureau of Investigation of the A.M.A. announces (*J.A.M.A.*, Aug. 10, 1935) that the mails have finally been closed to the W. O. Coffee Company.

The postal authorities took this action because they declared, "It is a scheme for obtaining money through the mail by means of false and fraudulent pretenses, representations and promises."

¹ Silbert, S.: *Surg., Gyn., and Obs.*, 61:214, Aug. 1935.

THAT THERE IS A RELATION between business and charities is well known. The New York Times of July 26th editorially comments on the subject of gifts made by corporations to charitable causes. This editorial states that such gifts have recently provided about one-fourth of all the funds raised in the United States for community chests.

Continuing, the Times says that private philanthropies have faced an increasingly difficult task, and that in order to encourage such giving, the community chests and councils, acting at the requests of 400 local funds in all sections of the country, brought a new proposal to Washington, urging that a provision be written into the new tax bill permitting corporations when they file their income tax returns to deduct charitable contributions up to five per cent of the net incomes.

President Roosevelt expressed himself as opposed to this, asserting that such gifts are made to obtain good will, and that he did not believe any company . . . has a right to buy good will.

A NOTICE has been received from the Committee on Legislative activities of the American Medical Association under date of July 31st, in which there is one outstanding piece of good news.

"The Committee has been reliably informed that the American College of Surgeons has written to the President for the purpose of correcting any impression which might prevail to the effect that the College favors compulsory sickness insurance. It is stated that the College, through its governors, its regents or executive committee, has not at any time given voice to such a sentiment."

THE SECRETARY OF THE STATE of New York recently refused to accept for filing a certificate of a corporation which was organized to engage in the practice of

optometry and to render oculist's work and services to the public, although the proposed certificate narrated the corporation would only employ licensed optometrists to do the work.

The refusal was based on the prohibition that a corporation is prohibited from engaging in the practice of optometry by virtue of Section 1433 of the State Education Law. An appeal was made to the courts and the Supreme Court of Albany County sustained the refusal. This adds another group to that of law and medicine and dentistry, all of which cannot be practiced by corporations.

THE *Saturday Evening Post* of August 3 editorially says that "The depression would be over if . . ." After discussing the evident need for replacements, the working of natural forces of recovery, the prospect of buying to make up for unsatisfied demand, the editorial comments that recovery cannot get under way because it is driven back again and again. It continues: "Capital will not seek investment and enterprise will not route depression as long as both are mauled and beaten. . . . The depression would be pretty well over if the natural forces of improvement were allowed to operate, and if the meddlers would only leave the patient alone." We who are watching trends in medical practice can agree with all this. There are distinct evidences that the profession, too, is noting signs of recovery. We, too, voice the sentiment that "meddlers" should leave us alone. In that event, the profession will take its part in recovery, and the public will be served by us, in the future, as we have served it, in the past. Meanwhile the profession will continue to carry the extra burden imposed on it by the depression in caring for additional numbers of our people forced "below the comfort" level.

MEDICAL RADIO BROADCAST

The Medical Information Bureau of the New York Academy of Medicine announces the following radio address to be broadcast from Station WABC and the Columbia Broadcasting System network:

Thursday, September 5, 1:15 P.M.—Speaker: Dr. W. C. Cutler, Jr., Associate Surgeon at Roosevelt Hospital. Subject: "Help for Hurt Hands."

An indication that the workers do not wish health insurance is seen by Dr. S. B. Ross of the Hotel Roosevelt, who tells in the *New York Medical Week* of a canvass

of the employees of a large organization asking how they felt about contributing to a fund for medical care. Not one vote for it was turned in.

Society Activities

Executive Committee Proceedings

At a special meeting of the Committee held on July 19, 1935, the following resolutions were adopted:

That the Aetna Insurance Company be notified by the proper officials of the Medical Society of the State of New York that the arrangement between the said Aetna Company and the Medical Society of the State of New York be terminated as of midnight, December 31, 1935.

That the Insurance Committee, Mr. Brosnan, counsel, and Mr. Wanvig, insurance representative, be instructed to act with power for the purpose of bringing into being an arrangement between the Medical Society of the State of New York and the Yorkshire Indemnity Company.

In accordance with these resolutions a letter will reach all members advising them of the change, as follows:

SPECIAL NOTICE

To All Members:

At midnight, December 31, 1935, the State Society's group malpractice insurance contract with the Aetna Life Insurance Company of Hartford will terminate.

A new contract with the Yorkshire Indemnity Company of New York will become effective at that same date and hour with respect to all new and renewal policies dating on and after January 1, 1936.

The Aetna will carry to expiration its liability under all policies issued prior to that date and, without limit of time, will be liable for suits and claims then outstanding or those which may arise in the future for acts of insured members while its policies were in force.

The transfer of this contract has been under consideration for some time and was finally concluded with the Yorkshire when the Aetna demanded an increase in rates which your Insurance Committee was unable to accept as necessary. The base rate for the present will remain at \$30. The new contract, however, provides for economies and improved methods of operating and accounting which, it is believed, will make the protection more valuable to the members and, in due time, produce a lower rate.

The Insurance Committee has felt for a long time that the Society could not be responsible for the malpractice insurance welfare of its members unless all of the insurance under its master policy was handled by an agency responsible directly to the Society, and the new contract has made such an arrangement possible. Hereafter, all certificates of insurance under the Society's master policy will be secured from and supervised by the insurance representative of the Society, Mr. Harry F. Wanvig of 70 Pine Street, New York City. Details regarding the new plan will be sent to you by Mr. Wanvig.

For your own protection and to assist all

concerned, you are requested to cooperate with him. You are especially requested to complete and return to him promptly the new application form which will be required.

In terminating the contract which the Society has had with the Aetna Life Insurance Company for nearly fifteen years, we desire to thank that company for its loyalty to the Society and the fairness with which it has always discharged its obligations to the members.

D. S. DOUGHERTY, *Secretary*

By referendum vote of the Executive Committee, the following recommendations of the Committee on Economics were recently adopted:

1. That the Medical Society of the State of New York proposes to Mr. Lester W. Hertzog, Administrator, New York State Works Progress Administration, that injured persons among the "Works Progress Employees" (who are beneficiaries of the United States Emergency Compensation Law) be given medical care by the physicians on the panel of physicians authorized by the Commissioner of Labor, Elmer F. Andrews, under Chapter 258 of the Laws of 1935 of the State of New York;

That such workmen shall have free choice of physicians in the same manner as provided for the employees of industry, and under the same terms and conditions as prescribed in that Law for the regulation of the conduct of physicians, employers and employees;

And, that compensation of physicians for such service shall be in accordance with the provisions of "Rules and Regulations No. 1, United States Emergency Compensation Commission, governing compensation and medical expense for Works Progress Act, issued July 15, 1935, mimeo No. 5906." From which is quoted:

"IV Medical Treatment, Sec. 10 — page 7. "State Compensation officials will inform physicians that the Commission will pay medical fees not in excess of the minimum charge prevailing in the community for similar service."

2. That the Medical Society of the State of New York propose to Mr. Alfred Schoellkopf (attention of Dr. H. Jackson Davis) that the administration of "Medical Relief" integrate provision of medical service to the recipients of welfare and emergency relief through the panel of physicians created by the authorization of Labor Commissioner, Elmer F. Andrews, under Chapter 258 of the Laws of 1935 of the State of New York, under the same specified regulation and supervision by the local County Medical Societies as is established in that Law; and upon the same schedule of fees as now established for workmen's compensation or which may be promulgated by the Commissioner under the terms of Chapter 258.

D. S. DOUGHERTY, *Secretary*

Committee on Workmen's Compensation

COMMUNICATION No 8, AUGUST 10 1935

Chapter 258 (WCL) Sec 1, par 13 (d) specifies, when in the administration of the Law there is need for expert opinion "on the diagnosis, the causal relationship between the alleged injury and subsequent disability, proper treatment, and the extent of the disability of such claimant," that a physician shall be designated from "a panel of especially qualified physicians submitted by the medical society of the county," etc

This provision of the Law imposes the duty of composing such panel. The physicians named for this panel should be mature in judgment and experience and qualified to write competent expert opinions—possibly chosen from the seniors in the different groups of specialists. We are informed that there may be expected not more than 200 cases in the metropolitan area and not more than a total of 300 for the entire state which will come up for such designated consideration. The Law provides that the employer (or carrier) shall compensate this service "in an amount to be directed by the industrial commissioner"

There will *not* be a considerable amount of referred work, written opinions will be required commonly, and these opinions should represent the seasoned judgment of medical experience. From this it will be evident that eligibility to the panel should be narrowly limited—and some who are qualified will not choose to accept such certification

The Industrial Commissioner has requested that this panel be planned to serve the five districts into which the Commission divides its work, as explained in a letter from this Committee, dated July 19, 1935, to the Chairman of the Workmen's Compensation Boards or Committees. In other words, we are asked to devise five regional panels. Now it is suggested as a first step, that each local county Board or Committee submit to this State Committee its list of physicians who are qualified and willing to accept such designation, in each instance giving the qualifications, address, etc., of each physician

Where it is thought advisable to reduce the list of any region, then we shall undertake to coordinate the selection thru the authority of the local County Medical Societies

Therefore, Now,* each county Board or

* Some counties already have provided the Committee with such lists and duplication will not be necessary

Committee will please forward to this Committee its suggestions for physicians especially qualified in the following specialties, and who are selected in accordance with the above explanations, bearing in mind that in view of the regional character of the organization of the panel it will *not* be necessary for each county to nominate a candidate for each specialty, the outstanding seniors who are willing to accept the service should be named

- | | |
|-------------------|------------------------|
| Neurology | Vascular Diseases |
| Psychiatry | Genitourinary Diseases |
| Orthopedic | Gastroenterology |
| Ophthalmology | Proctology |
| General Surgery | Otology |
| Cardiology | Dermatology |
| Diseases of Lungs | Radiology |
| Internal Medicine | Dentistry |
| Gynecology | Laboratory Work |

COMMUNICATION No 9, AUGUST 10 1935

C 104 Blank forms for the "48 hour" report of the attending physician will be furnished by the Industrial Commissioner, at least for the remainder of the year or until other arrangement is agreed upon

The Commissioner will forward to the Compensation Board or Committee, or Society headquarters of each county, a sufficient supply of blank forms and authorized physicians of the county shall obtain the necessary supply of them from such source

C-4 The "20 day report" The insurance carrier or employer should supply this form

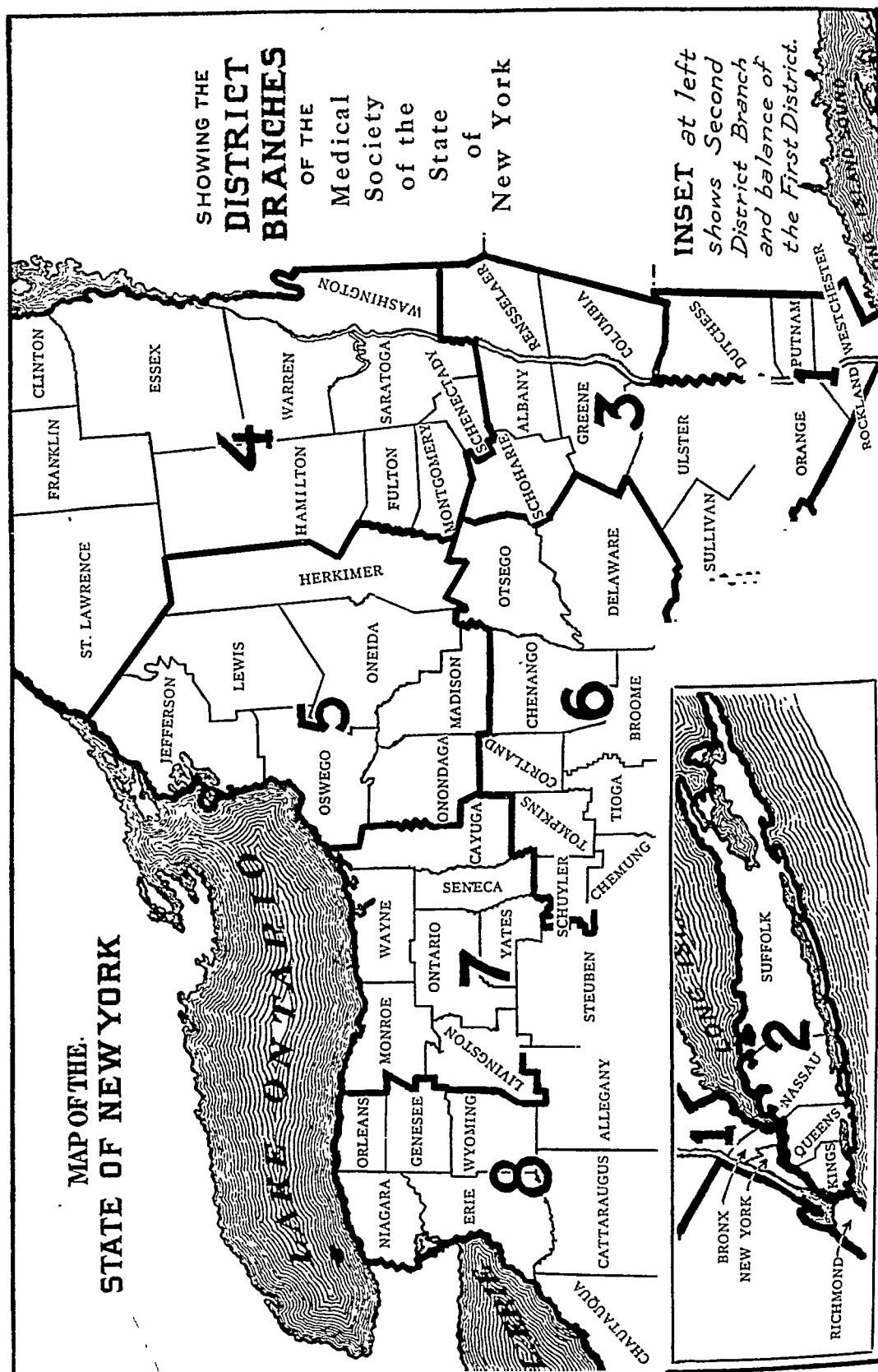
It has come to the notice that one insurance company has sent letters in one county to their insured employers giving a list of physicians whom they urge to the employers to engage in the care of any injury to an employee

To the best knowledge of this Committee at the present time, the employer's right to recommend a physician is limited to the instance in which the employee has made written request for such recommendation after the occurrence of the accident

If any employer has exacted signature of a waiver of choice of physician from his employees, this Committee would be pleased to be advised

In every instance, please give exact information with all possible evidence, that we may have tangible facts upon which to act, rumors are valueless

Remember that communications sent before July 1 1935 are not a violation of the new Law. Names of physicians "posted" in a public place before July 1 1935 should be removed or the physician will be subject to a charge of "solicitation"



We advise that a friendly and somewhat tolerant attitude be maintained toward the missteps which may occur in the transition period necessary to the establishment of the provisions of the Law. We believe that most employers and local agents of insurance carriers, properly approached, will be found friendly and cooperative—especially when they learn that the organized medical societies are fulfilling their obligations. Of course, repeated or deliberate offense against the provisions of the Law cannot be condoned.

In one county a workman suffered a fracture of the spine, was placed in an institution under care of a surgeon (SA). Two days later a physician (XC) appeared with the man's family, a release was signed and the patient transported to another institution to the care of the second physician. Charges were preferred by both the insurance carrier and the first physician. After due hearing, recommendation was made to the Commissioner that the second physician (XC) be removed from the authorized list on the ground that he had subjected the patient to the stress and hazards of further transport without careful examination of the patient and actual investigation of the x-ray films and the chart record.

In this case the question of the "qualification, training and experience" of the second physician was judged on the evidence of lack of reasonable care and consideration for the pre eminent question as to the welfare of the injured workman. The Hearing Committee held that a very seriously injured man, having reached a place where proper care was available, should not have been placed in the jeopardy incident to further transport, without careful evaluation of his condition. The hearing was arranged promptly and the Committee rendered an unequivocal decision and recommendation.

If each local County Medical Society will meet its obligations with equal fidelity and dispatch, soon we shall have wholehearted support for the operation of the amended Law by all parties concerned.

The lesson in the above case, for every physician on the panel of authorized physicians, is this: *The welfare of the injured workman must come before all other considerations.*

The integrity of organized medicine will meet the test imposed by the amended Workmen's Compensation Law.

CHARLES GORDON HEYD, M.D., Chairman

DAVID J. KALISKI, M.D.

FREDERICK E. ELLIOTT, M.D.

Meetings of District Branches

The dates and places for the annual meetings of the District Branches have now been determined. Arranged serially they are:

First—New York City—October 8
Second—Garden City—November 21
Third—Troy—September 24
Fourth—Saratoga Springs—September 27-28
Fifth—Watertown—October 1
Sixth—Elmira—September 10

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And arranged chronologically they are:

September 18—Sixth
September 24—Third
September 26—Seventh
September 27-28—Fourth
October 1—Fifth
October 3—Eighth
October 8—First
November 21—Second

Map on facing page delineates the counties making up the District Branches.

County Societies

Chemung County

THE ANNUAL OUTING of the Chemung County Medical Society was held Wednesday, August 7, at the Cold Brook Club, Elmira.

Baseball, quoits, and other games featured the afternoon, with dinner at 6:30. Dr. Raymond A. Turnbull was chairman of the event. Dr. LaRue Colegrove is society president.

Cortland County

HIS MEDICINE KIT was the only possession left to Dr. and Mrs. Robert Fairchild, of Marathon, after the storm of July 7.

Everything else floated away about 3 o'clock Monday morning, when the swollen Tioughnioga River uprooted their house, and their home furnishings, clothing, and other belongings spun downstream, they knew not where.

Warned of the rising water, the Fairchilds had taken refuge at the Three Bears Inn, nearby but on higher ground. Sending their children to Syracuse for safety, the doctor and Mrs. Fairchild remained at Marathon to minister as best they could to the stricken village's health needs.

Erie County

THE CORNERSTONE for the new addition to

the Charity Eye, Ear and Throat Hospital of Erie County, 693 Ellicott Street, Buffalo, was laid on July 11.

Kings County

A CAMPAIGN to ENLIST 1,000 wives of Brooklyn physicians and surgeons in a movement to spread health information through women's clubs, neighborhood houses and the like has been inaugurated by the Women's Auxiliary of the Kings County Medical Society, of which Mrs. John L. Bauer, of 984 Bushwick Avenue, is president.

The society now has 160 members, membership being limited to wives of practicing physicians and surgeons, but expects to expand under the leadership of Mrs. Bauer, who is also organizing president of the Women's Auxiliary to the Medical Society of the State of New York.

In addition, Mrs. Bauer is confronted with organizing wives of physicians in 57 counties of the State, if New York is to hold its own in future conventions, such as the one in Atlantic City.

Monroe County

EXAMINATION SERVICE for early discovery of tuberculosis will be extended in many communities in Monroe County, it is announced by the County Health Committee of the Tuberculosis and Health Association.

Tuberculin skin tests were given to 1,287 individuals and 341 fluoroscopic examinations were given to children and adults recently in Fairport, Webster, and Spencerport.

As a result, 76 were referred either to Iola or to a private physician for chest x-rays, according to a report submitted by Dr. John J. Lloyd, Medical Society Committee chairman and delegate to the National Tuberculosis Association's convention at Saranac Lake.

New York County

DR. FREDERICK TILNEY, professor of neurology at the College of Physicians and Surgeons of Columbia University, has been elected medical director of the Neurological Institute.

IT NOW APPEARS that the Lucien Howe Medal in Ophthalmology recently awarded to Drs. Joseph H. Globus and Sidney M. Silverstone was conferred by the University of Buffalo and not by the Medical Society of the State of New York, as noted in these pages July 15. The error was due to following too trustingly a report in the *A. M. A. Journal*, where the award was inadvertently confused with an award with the same name

that has been made in previous years by the medical society. The late Dr. Howe gave to the University of Buffalo some years ago a sum of money, interest from which was to be used for the manufacture of a specially designed medal to be given annually to the author of a work on an ophthalmologic subject. Dr. Harold W. Cooper, Buffalo, is chairman of the committee on award.

AN EIGHT-STORY HOSPITAL and penthouse to cost \$2,500,000 is to be built at 67th St. and York Ave. as new quarters for the Memorial Hospital for the Treatment of Cancer and Allied Diseases, 2 W. 106th St., it was disclosed when plans were filed with the Manhattan Department of Buildings.

At the hospital it was said arrangements for the beginning of construction had not been completed. The Memorial Hospital, which last year celebrated its fiftieth anniversary, has been affiliated with the New York Hospital for some years, and with the construction of its new building will form another unit of the hospital community along the East River in the 60's.

AMONG THE PATIENTS of Dr. Clarence Rice, who died at his home in New York on July 9 at the age of 80, were Enrico Caruso, Oscar Wilde, E. H. Sothorn, Julia Marlowe, Lillian Russell, and Edwin Booth, whom he attended on his death bed.

Oneida County

DR. GORDON A. HOLDEN, Dr. Hyzer W. Jones, and Dr. Edward R. Evans, of Utica, are in Europe to attend medical clinics in England, Scotland, France, Germany, and Belgium. They plan to visit Edinburgh, London, Paris, Berlin, and Brussels. They will return about September 1.

Onondaga County

OLD WAR SONGS that were sung in France when the unit was serving at Contrexeville, rang out over Skaneateles Lake on August 3 when members of Syracuse University Hospital Unit G gathered at the home of their former commander, Lieut. Col. Edward S. Van Duyn, to observe the 17th anniversary of their initiation into the World War. There were 34 former officers and men present.

The unit dates its anniversary from the time the first trainload of wounded arrived at the base from the Chateau Thierry Sector on Aug. 3, 1918. The first consignment consisted of 614 wounded men and from then until the end of the war the unit continued its work at Contrexeville.

Medicolegal

LORENZ J. BROSNAN, Esq.

Counsel Medical Society of the State of New York

Accidental Injury to Patient

Very recently a case* was brought before the highest court of one of the Eastern states in which the liability of a physician for an accidental injury to a patient was passed upon.

The patient in the case had suffered from the gripe for some weeks and had come to the doctor's office by appointment for the purpose of undergoing a general physical examination. As a preliminary part of the examination the doctor's nurse, in a room adjoining the doctor's office, took specimens of blood for analysis which she obtained by pricking with a needle his finger and his arm near the elbow. He was cautioned to look away so that he would not see the blood. After the specimens were so obtained, the patient remarked to the nurse that he did not feel well. She promptly led him into the consultation room and informed the physician. The patient told the doctor that he thought he was going to faint. He was then given some aromatic spirits of ammonia and was taken to a smaller room and seated on a stool placed about three or four feet away from a table upon which was resting the doctor's sterilizer. The doctor instructed the man to hang his head down and assisted him to do so. At that point he apparently lost consciousness, and fell forward, striking the table causing it to tilt. The sterilizer fell to the floor, and some of the boiling water came into contact with his right arm and body, burning the patient.

The patient brought an action against the physician to recover damages for the burns which he sustained and the case was tried before a jury. The plaintiff testified that his fall was due to fainting, but the doctor said that he had a convulsion and that the upsetting of the boiling water was caused by the convulsive movements of the plaintiff's arms. The evidence showed that at least ten or fifteen minutes elapsed between the taking of the blood and the accident, although the defendant claimed it was nearly half an hour. The plaintiff in putting his case in evidence called no medical testimony to support the theory that it was not proper treatment to place him on a stool with his head down, under the circumstances. The doctor, on the other hand, called

certain admittedly competent physicians who testified that such practice was proper. The only medical testimony upon the subject was to the effect that the unconscious state of the patient could not have been fainting brought on by taking blood samples so long before as fainting if any would occur immediately. The expert testimony was that the remark of the patient that he thought he was going to faint would not make placing him on the stool, located as it was, improper. It was also testified by the medical witnesses that the plaintiff actually had had a convulsion rather than a fainting spell.

The issues in the case were submitted to the jury and a large verdict was rendered in favor of the plaintiff. The trial judge, however, set the verdict aside and directed judgment in favor of the defendant. The case was taken up on appeal by the patient, and in a well written opinion, the appellate court affirmed the judgment of the lower court.

The contention urged on behalf of the appellant was that the case was not one to be decided on the rules of malpractice, but was to be decided as a simple negligence case in which the relation of the physician and patient played no part. The purpose of the contention, of course, was to enable the plaintiff to make out a cause of action without establishing by competent medical testimony that the doctor had as a physician violated some duty arising out of the relation of physician and patient. The appellate court rejected the theory of the appellant saying in part:

Plaintiff's counsel argues that his client was a business invitee of defendant and that hence the case is governed by the rules applicable to that relation rather than by those concerning the liability of a doctor for negligent treatment of a patient, and which involve questions as to the proper exercise of professional skill and judgment. We are unable to see the case in that way. If plaintiff's injury were the result of some defect in the premises, or of some negligent arrangement of the appliances therein there might be merit in counsel's argument. We do not understand plaintiff to contend that it was negligent for the doctor to have a sterilizer in his office, such a position would be untenable. Under present day conditions sterilizers are a necessary part of the equipment of a doctor's office. They enable him to avoid the danger of transmitting infection by the instruments and appliances which he must use in caring for those

* *Saltzer vs. Rickord*, 179, Atlantic 449

who come to him for treatment. And, if the sterilizer is a proper part of his equipment, certainly it is not negligence for a doctor to place it on a table against the wall of his office.

The court further said:

The boiling water was but incidental to the entire happening. Its only effect was probably to cause more serious injuries than would have occurred if some other injuring object existed. If plaintiff had fallen from the stool and injured himself by contact with some other object in the doctor's office, or had he struck the floor or the table or wall or anything else and wounded himself, the legal situation would be the same. No witness was called to testify that the measure of care under the circumstances was not all that should have been exercised. Should the doctor have anticipated that the plaintiff would fall? The testimony of the other doctors is that he should not. No witness says that he should, and there is nothing in the record indicating that he should, except the fact that the plaintiff did fall. The plaintiff's fall in itself could not speak negligence. As under the situation which existed the doctor had no reason to anticipate the fall, he cannot be adjudged guilty of an absence of care.

X-Ray Treatment of Acne

A girl, about 21 years old, consulted a physician specializing in x-ray work with respect to complaints concerning eruptions on her face. The doctor who examined her found that she was suffering from acne and that the condition extended over her cheeks and forehead. He administered x-ray treatments on four occasions over four areas of the face, each time carefully blocking out, by means of lead and rubber, the areas which he did not wish to permit to be exposed to the x-ray. The patient returned about a month after the last treatment, and the doctor found that the acne had disappeared, and that she needed no further treatments. On that day, however, she complained of some blackheads and a loosening of her hair above the forehead in an area about one-half inch wide by two and one-half inches long. The doctor directed her as to the manner of treating the blackheads and the patient was never again seen by the doctor.

It appears that the patient was employed by a firm of attorneys, and the said attorneys brought an action against the doctor charging him with having been negligent in administering the x-ray treatment. The complaint charged that complainant had permanently lost her hair. However, when par-

ticulars were obtained from the plaintiff as to the extent of her injuries, it appeared that the loss of hair was merely temporary in nature.

As the case was about to be reached for trial in order on the calendar, conferences were held with plaintiff's attorneys and a discontinuance was finally obtained when the plaintiff's attorneys learned that the doctor stood ready to go through with the defense of the case.

Claim for Failure to Recognize Fractured Jaw

A young man, employed as a farm hand, came to the office of a physician for treatment with respect to certain injuries which he told the doctor he had received when a team of horses had run away with him and dragged him over the ground. An examination showed that the man was suffering from minor lacerations and contusions of the back and the left side of the face. The doctor applied antiseptic dressings to the injuries, and since the man lived in a village several miles away, suggested that he return to his home and call upon another physician located nearer to him for the purpose of obtaining such treatments as might be necessary. The doctor, upon examination, found nothing to indicate that there were any bone injuries, all injuries apparently being superficial.

A few days later the patient entered a hospital and received treatment for pneumonia, from which he recovered in about two weeks. While he was in the hospital he made certain complaints about a pain in his jaw, and x-rays were taken to ascertain whether the jaw was fractured. The physician in charge of him ascertained that if there was a fracture in the jaw, it was only a slight crack with no displacement, and by the time was discharged from the hospital he had no complaints.

The patient subsequently brought a malpractice action against the first doctor who attended him, in which the claim was made that the defendant, in examining him, had negligently failed to ascertain that the plaintiff's jaw was fractured. The case apparently was a strike suit for, after the action had been pending for some time and plaintiff's attorney had found out that no offer of settlement would be made by the doctor, he consented to discontinue the action.

The Florida Medical Association will hold its annual meeting in May next year aboard ship, cruising through the Bahama waters for two days and three nights, with half a day ashore at Havana.

"Doctors may deduct for income-tax purposes the cost of magazines kept in waiting-rooms." But isn't this carrying 1908 business over into 1935?—*Richmond Times-Dispatch*.

Across the Desk

WHEN THE MOVIE ACTOR throws the custard pie, he is really hurling something more solid than it seems, according to the sober statistics of the scientists who tell us just how much of this or that is in everything. For the milk in the custard pie contains more solids to the pint (or pound) than a pound of onions, beets, carrots, squash, pineapple, turnips, oysters, cabbage, radishes, cauliflower, spinach, watermelon, pumpkin, tomatoes, asparagus, celery, lettuce, or cucumbers! So says a report of the U. S. Public Health Service.

It is on one of the minerals in milk—calcium—that the new campaign is founded that aims to induce the people of our State to drink more of it, so we may say that it is on a solid basis, anyway. Hundreds of our physicians are in the dairy counties, and the success of this campaign may aid the welfare of their communities and of their clientele. The new drive is right in line, too, with the address of President Mc Lester of the A.M.A. at Atlantic City on June 15 on "Nutrition and the Future of Man." He made a strong argument for the use of more than a mere "adequate" amount of milk in the diet, and called upon the physician to help educate his patients in formulating the best diet from all viewpoints, economic and hygienic, for milk at present prices is "a bargain in food values."

But the Bureau of Milk Publicity at Albany is going far beyond all previous campaigns in its appeal. It strikes boldly into new territory. We have had the privilege of seeing the advertisements which will soon be broadcast through the press, and they are certainly striking. Some of them involve medical matters, and may lead the doctor's patients to ask his advice. For instance, "will the calcium in milk clear away skin eruptions and blemishes?" "Calcium is one of the first things expensive skin specialists prescribe for skin disorders," asserts one of the ads, and "you get a calcium beauty treatment with every glass of milk you drink!" Nor is the young woman reader left in any doubt about the practical effect. "No one ever kissed her good night," we are told in large black capital letters, "and THEN she changed to milk," after which Tom said: "Your skin feels like rose-petals," and she replied "Yes, dear old Dr. Jones told me about the surest beauty treatment for clearing the skin—just drinking milk every day." So the doctor must be ready for questions, especially if Tom fails to do his part.

It is noticeable that the Bureau of Milk Publicity is appealing to adults in the present drive. When asked about this, their representative replied that the children "now consume as much milk as possible under economic conditions." But do they? Many will recall the study of more than 1000 children in an upstate dairy county made last year by local physicians under the T.E.R.A. and the State Health Department. More than one-fourth of them, or 27.9 per cent, to be exact, were found receiving one cup or less of milk daily, and nearly half of these received no milk whatever. If that condition was uncovered in a dairy county, what is it in other parts of the State?

This time, however, the grown-up is to be made milk-conscious, and it must be said that the ads have a novelty never before seen in lacteal publicity. Milk is urged as a slimming diet. "Reduce with milk. Follow the lead of the movie stars. Lose weight scientifically, but keep your pep and good looks," are some of the phrases. A booklet catchily called "The Milky Way" is to be had on application, containing menus with milk for reducing.

Men are approached from two angles, both of interest to the doctor. The first is that the husky he-man is a milk-drinker. Frank Buck, the explorer and big-game expert, is quoted to show that milk is "a fine-nerve food" and muscle-builder, and Jack Dempsey asserts that milk "contains a punch for everybody." If the Milk Bureau had wished, they could, of course, have also cited such milk-drinkers as Tunney, Selmeling, Carnera, Baer, Mussolini, George Bernard Shaw and Edison. When Lindbergh landed at Le Bourget, after his famous flight, his first request was for a glass of milk. Even African tribes have been investigated, and it is found that the milk-drinkers win the battles. The other angle of the Bureau's advertising is the "alkaline effect" of milk. Many advertising pages nowadays are full of the desirability of "getting on the alkaline side" and avoiding acidity in any and every part of the human frame! The Bureau of Milk Publicity is cleverly taking advantage of all this ready-made public psychology and cashing in on it by the assertion that milk has an "alkaline effect."

When questioned on this point, the representative of the Bureau said:

By alkaline effect, we of course refer to the final effect of milk in the body rather than to

the original acidity of milk which is of course, due principally to the lactic acid content.

In general, foods that are rich in protein such as meat and eggs tend to exert an acidic effect in the body because when they are "burned" in the body a number of the normal "end products" are acidic, for example, uric acid, sulphuric acid, phosphoric acid.

On the contrary most fruits, vegetables and milk produce an alkaline effect because they contain salts of the alkaline metals such as, Calcium, Magnesium, Sodium and Potassium. The original acid parts of the salts and also the free acids (for example, citric acid as in lemons, malic acid as in apples and lactic acid as in milk) are "burned" in the body to carbonic acid, which is readily eliminated in the breath. This leaves the alkaline metals available for neutralizing the acid products from protein. Obviously, the taste of the food or its original acidity does not indicate the final effect on the body.

The Bureau cites in support of its claim the researches of the Mellon Institute of Pittsburgh, Dr. W. D. Sanson of the Metabolic Clinic of Santa Barbara, California, and Dr. James S. McLester, President of the A.M.A., who states in his book, "Nutrition and Diet in Health and Disease" on page 142: "The mineral elements exist in milk in several forms: (a) as salts, chiefly as the salts of phosphoric, sulphuric, hydrochloric and citric acids; (b) as the dissociated ion, and (c) in more or less intimate chemical and physiochemical union with proteins and other organic bodies. The base-forming are slightly in excess of the acid-forming elements."

With alkalinity, then, as a text, the Bureau claims that "Milk heads off 'morning after,'" and it recommends that "the next time you overindulge . . . and your system accumulates an excess of acid products . . . simply drink a fresh, cool glass of plain milk before you go to bed . . . and another in the morning before breakfast. It's great. . . . It helps overcome the accumulation of acid products in the blood, helps build up your alkaline reserve, helps you to come back to par—without drugs or dosing."

Here, then, we have a totally new kind of milk campaign, not for nursing mothers and ailing babies, but aimed at men and women who long for strength and beauty. It is going to pervade the State from the Niagara River to Montauk Point, and will present its claims before the eyes of the clientele of every physician, whether in the crowded canyons of Manhattan or the leafy hillsides of Herkimer. Its claims will be more than likely to send many to the doctor's door to ask his advice about them.

We are doing pretty well right now, if the figures don't lie, for an average of 39 gallons of milk now goes down the throat of every man, woman and child in the United States each year. But other nations drink still more. Germans take 61 gallons, the Swiss 67, and the Swedes nearly 70. A leaflet issued by a large milk company suggests that we should try for 76.25, but does not explain just why that fractional figure is the optimum. Is there any limit? The Sumerians, Babylonians and Egyptians reached the point where they made the cow a deity and worshiped her. Are we on the way?



© American Magazine

"This is the last time I operate on a magician."

IN SPITE of all that has been said on the subject, a recent survey of a typical industrial area by the U. S. Public Health Service, found 19.5 per cent of the workers using the common towel and 13 per cent using the common drinking cup. Over 40 per cent were exposed to unguarded moving machinery. About 33 per cent were provided with part or full time medical and nursing service. So much for the plight of the workers. It would be interesting to learn something about the plight of the "company doctors."

A BOUQUET is handed to the doctors employed in relief work by Dr. H. J. Davis, medical director for the State TERA. After noting that the State death rate last year dropped to an all-time low, that the infant mortality was never lower, and the maternal mortality lower only in 1916, he adds: "There is no question that the additional medical aid provided by relief funds as a part of relief to the needy unemployed has played a large part in the health record."

DOCTORS SAY alcohol is a depressant, but why does it concentrate in the foot that is on the accelerator? —*Publishers Syndicate.*

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

The Kidney in Health and Disease.—Edited by Hilding Berglund, M.D., and others. Octavo of 754 pages, illustrated. Philadelphia, Lea & Febiger, 1935. Cloth, \$10.00.

Surgical Pathology of the Peritoneum.—By Arthur E. Hertzler, M.D. Octavo of 30. \$5.00.

Urology.—By of 1111 pages, B. Saunders

Fr A. Joll, M.D., ill 3.S. Sixth edition. 16mo of 612 pages, illustrated. Baltimore, William Wood & Company, 1935. Cloth, \$2.75.

Handbook of Anaesthetics.—By J. Stuart Ross, M.B., and H.P. Fairlie, M.D. Fourth edition. Duodecimo of 299 pages, illustrated. Baltimore, William Wood & Company, 1935. Cloth, \$4.00.

The Biochemistry of Medicine.—By A. T. Cameron, M.A., and C. R. Gilmour, M.D. Second edition. Octavo of 518 pages, illustrated. Baltimore, William Wood & Company, 1935. Cloth, \$6.00.

Recording of Local Health Work.—By W. F. Walker, Dr. P. H., and Carolina R. Randolph. Quarto of 275 pages, illustrated. New York, The Commonwealth Fund, 1935. Cloth, \$2.00.

Electrotherapy and Light Therapy.—Richard Kovács, M.D. Second edition. Octavo of 696 pages, illustrated. Philadelphia, Lea & Febiger, 1935. Cloth, \$7.50.

The Doctor's Bill.—By Hugh Cabot. Octavo of 313 pages, illustrated. New York, Columbia University Press, 1935. Cloth, \$3.00.

Manual of Diabetes.—By J. J. Conyb. M.D. Octavo of 123 pages, illustrated. New York, Oxford University Press, 1935. Cloth, \$2.00.

Clinical Management of Syphilis.—By R. Harnes, M.D. Octavo of 71 pages, illustrated. New York, Macmillan Company, 1935. Cloth, \$1.50.

Clinical Laboratory Methods and Diagnosis.—By R. B. H. Gradwohl, M.D. Quarto of 1028 pages, illustrated. St. Louis, C. Mosby Company, 1935. Cloth, \$8.50.

The Treatment of Rheumatism in General Practice.—By W. S. C. Copeman, M.A. Second edition. Octavo of 228 pages. Baltimore, William Wood & Company, 1935. Cloth, \$3.25.

The Woman Asks the Doctor.—By Novak, M.D. Octavo of 189 pages, illustrated. Baltimore, Williams & Wilkins Company, 1935. Cloth, \$1.50.

Ten Years of Rural Health Work.—By Frank Walker, Ph.D. Duodecimo of 100 pages, illustrated. New York, The Commonwealth Fund, 1935.

REVIEWED

Diseases of Women. By Ten Teachers. Edited by Comyns Berkeley, et al. Fifth Edition. 8vo, 568 pages, illustrated. Baltimore, William Wood & Company, 1934. Cloth, \$6.00.

Any textbook that has reached the fifth edition does not need much of an introduction, especially when the volume in question has been written by ten such eminent specialists in gynecology and obstetrics as are the present authors.

In this fifth edition the arrangement and subject matter of the entire book have been revised, and a well balanced account of modern thought and practice in gynecology is the result.

Recent advances in ideas on the functions of the ovaries and other endocrines and their relation to menstruation and its disorders have been fully dealt with.

It is an excellent book, concisely and readably written.

WM. SIDNEY SMITH

Benign, Encapsulated Tumors in the Lateral Ventricles of the Brain. Diagnosis and Treatment. By Walter E. Dandy, M.D. Octavo of 189 pages, illustrated. Baltimore, The Williams & Wilkins Company, 1935. Cloth, \$4.50.

The remarkable advances of brain surgery are nowhere better exemplified than in the volume detailing Doctor Dandy's technique in diagnosing, operating on, and removing these benign and encapsulated tumors of the lateral ventricles of the brain. With the memory of most physicians, the removal of a tumor on the surface of the brain was a feat, but Doctor Dandy in his book includes 15 cases of deep tumors of the lateral ventricles, which present a definite clinical syndrome of local value, but are diagnosed accurately with precision by means of ventriculography.

Of the 15 cases reported, there was a complete removal of the tumor in 14. The

of the patients made a complete recovery. There were 3 deaths, but he adds that none of these deaths occurred in the last 7 cases and only 1 in the last 11 cases. The risks attending the operative removal of these deeply seated tumors, he states, have been gradually reduced by the use of electrocautery, continuous suction, and avertin anesthesia.

This is a contribution that should be read by every neurologist and neurosurgeon, and will prove of interest to every physician.

A. M. RABINER

The Principles of Therapeutics. By Francis Richard Fraser, M.D. The Abraham Flexner Lectures, Series Number Three. 12mo. of 135 pages. Baltimore, Williams & Wilkins, 1934. Cloth, \$2.00.

The contents of this book are based upon the third series of lectures delivered by the author under the auspices of the Abraham Flexner Lectureship.

As may be surmised, the book discusses, in the main, some of the more modern therapeutic agents, such as, the biologicals, the synthetic coaltar derivatives, and gland products. Its method of approach is interesting because the reader is led through the modern research laboratory by a scientific guide who can correlate his field with that of the practitioner. And so we read that toxoid is mixed with antitoxin to obviate the undesirable local effects of the pure toxoid; or that scarlet fever antitoxin is not yet on a firm basis; and of other facts which the practitioner would like to have clarified.

EMANUEL KRIMSKY

An Atlas of the Commoner Skin Diseases. By Henry C. G. Semon. Baltimore, William Wood & Company, 1934. Quarto of 221 pages, illustrated. Cloth, \$12.00.

Atlases of skin diseases are a great help to the doctor who has not the opportunity of studying actual cases. As early as 1876 Duhring published a valuable atlas and later George H. Fox and Jacobi. Rainforth, in 1914 compiled an atlas with Stereoscopic Views which brought out the individual lesions very distinctly.

All of these works were excellent, but the art of photography has so advanced, that the plates in this work of Dr. Semon far surpass those of any previous atlas. The photography has been beautifully done. The coloring is very natural. The plates are large so that they closely resemble an actual case and the individual lesions, in most cases, are clear and distinct. In the plates of warts on the face and molluscum contagiosa, the lesions are not as clearly defined as they might be. The plates of pemphigus and syphilis are good but too limited.

The chief criticism to be made is that there are only 103 plates contained in the book which is a very small number. The author has frankly admitted this, however, and hopes to add more material in a future edition.

No attempt has been made to give more than a brief description of the cases.

The author should be complimented on a work which cannot help being a great aid to the general practitioner on the diagnosis of the commoner skin diseases.

ALFRED POTTER

Treatment by Diet. By Clifford J. Barborka, M.D. Octavo of 615 pages, illustrated. Philadelphia, J. B. Lippincott Company [c.1934]. Cloth, \$5.00.

In this most practical book on clinical dietetics for the physician, the fact that relatively little space is devoted to clinical diagnosis and general therapeutics shows the excellent judgment of the author.

Devoted to diets in disease, the work portrays the manner in which disease may be treated by presenting menus for each meal, and there is a large variety of meals in each group. Thus the physician is saved the effort and energy of making these arrangements for the patient. The book is based on the broad general principle of telling the patient "what to eat," and not "what not to eat." And, to be sure, it certainly makes diet writing a more satisfactory therapeutic measure, both for doctor and patient.

WILLIAM S. COLLENS

International Clinics. A Quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 4, 44th Series, 1934. Edited by Louis Hamman, M.D. Octavo of 325 pages, illustrated. Philadelphia, J. B. Lippincott Company, 1934.

Some of the leading articles are "The Influence of the Emotions in the Causation and Care of the Psychoneuroses," "Non-Diabetic Glycosuria," "Vitamin B, Clinical Aspects," "Kala Azar," "Fever Therapy in Neurosyphilis" and "Myxedema and Diabetes Mellitus."

In an article, "The Lability of Diurnal Blood Sugar Levels in Insulin Treated Diabetics," it is shown that in some instances where the fasting blood sugar is too high, it may be very low at some periods of the day, and if enough insulin is given to lower the fasting blood sugar to normal, these patients will frequently experience reactions during the day.

There is a section on "Surgery," one on "Obstetrics and Gynecology" and the other usual features, with a clinical case study in the supplement, help make this a remarkably instructive volume.

W. E. McCOLLUM

A NEW SCIENTIFIC METHOD OF IDENTIFICATION

CARLTON SIMON, M.D., *New York City*

Criminologist of the International Association of Chiefs of Police the New York State Association of Chiefs of Police and the New England Association of Chiefs of Police
and

ISIDOR GOLDSTEIN, M.D., *New York City*

Attending Ophthalmic Surgeon Mt Sinai Hospital

During the past year we have devised and completed a new method of identification, the foundation of which is based upon the correlation of the optic nerve with the many variations of patterns made by the network of the blood vessels of the retina or background of the human eye.

It answers the challenge of the criminal element who constantly seek in chemistry and surgery an avenue through which they may be enabled to destroy the earmarks of their identity. The use of this new method aims to discourage such surgical attempts being itself exempt from any similar interference.

It is not intended that this new method is to replace the fingerprint system, but that it may be utilized under certain circumstances and render service as a valuable adjunct in criminal science.

At various sessions of the Society of Plastic and Reconstructive Surgery, held during the past two years at the Academy of Medicine in New York City, there was demonstrated the result of plastic surgery which completely changed the facial appearance. Although it was not contended that surgery could alter the pattern of finger skin ridges, their eradication by third degree burns and surgery was believed possible. Such destruction would leave scarred tissue and the deliberate mutilation would obviously be a confession of a criminal record, yet it would make identification by comparison with previous ridge prints a difficult and questionable legal task. Any transplantation of skin ridges, if successfully accom-

plished though leaving tell tale scars, would require reclassification.

Those desperate criminals John Dillinger, Homer Van Meter and John Klutas, all three of whom have been killed, attempted to alter their appearance by surgery and also tried to erase their finger skin ridges by the use of chemicals, burns, and other methods. In spite of their painstaking efforts, they were identified by their fingerprints. Their failure to completely destroy their skin ridges does not, however, preclude the possibility that others might not be more successful.

This threat of organized crime has stimulated us to endeavor to develop a method which cannot be altered or destroyed and which is permanent throughout life as well as within reasonable limitations after death.

Mr Victor M E Koch, vice president of the firm of Carl Zeiss, Inc., of Jena, Germany, the internationally known makers of scientific instruments greatly encouraged this research work by placing their instruments and photographic data at our disposal.

With the use of a retinal camera, an instrument that has been used for the diagnosis of various eye diseases the optic nerve and the network of blood vessels of the retina or background of the eye can be expeditiously photographed through the pupil of the eye. This requires no special medical skill nor experience, but is an easy mechanical procedure. Although such photographs were readily

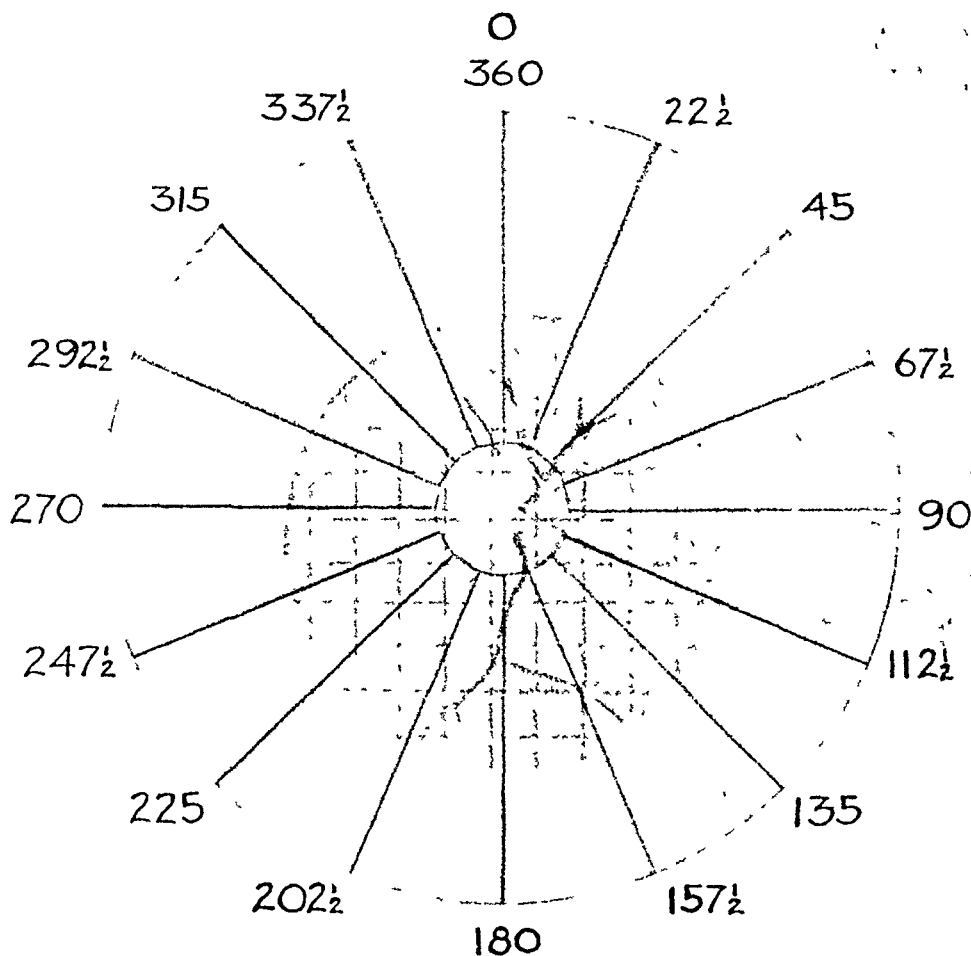
FIG. 1. ENLARGED PHOTOGRAPH OF HILL RETINA, VLINS, ARTERIES AND OPTIC NERVE

This picture was taken with the Screen immediately in front of the emulsion side of the photographic plate. After enlargement the 360 degree Protractor was superimposed upon the picture to ascertain the various angles.

The actual size of the retinal image is 30 millimeters in diameter (about $1\frac{1}{4}$ inches) the size of the photographic plate being 45 by 60 millimeters. The screen is the same size as the plate having meshes that measure exactly $2\frac{1}{2}$ millimeters (about $\frac{3}{32}$ of an inch). Numerous experiments disclosed that a smaller mesh would in some instances obliterate important details.

Both types of blood-vessels may be utilized in the measurement of their patterns but it considerably simplified the classification by selecting the veins, as these have a more distinctive appearance than the arteries, being larger, their lumen photographing darker. The veins and arteries may be jointly used, the veins given numerically an odd number and the arteries an even one.

To further simplify the classification it was deemed expedient to arbitrarily select the right eye as the one to be classified. Both eyes may be used, however, their individual patterns given



a numerical value, one serving as an enumerator and the other as a denominator. Should the left eye be used such selection should be specified.

With the aid of the known dimensions of the screen meshes and the angle determined by the protractor, the manner in which the veins enter the optic disk, the number of bifurcations of branches, their position and change of direction are as easily and readily charted as is a given point mapped out on the high seas by a navigator.

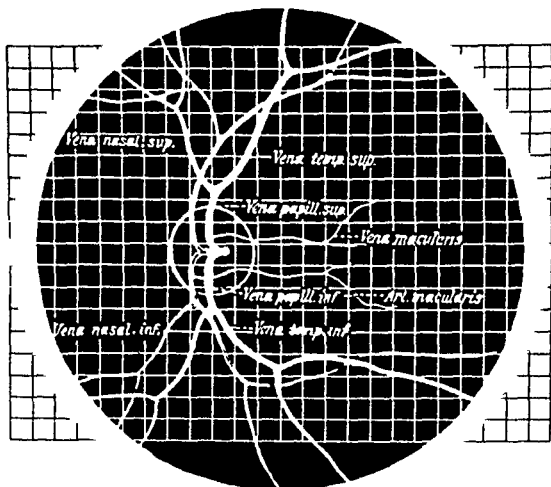
The position of the retinal vessels is different in every individual. In thousands of photographs none have been found the same. Age or disease may produce a change in tortuosity in the lumen of the vessels but the position of the veins and their correlation remain unchanged through life.

secured, there was no provision or contrivance by which the background of the eye, with its irregular patterns created by the branching of the blood vessels, could be charted, measured, and classified. For purposes of identification, it was necessary that various differences in individual eyes be noted in numerical values.

After considerable experimentation, success was achieved through the employment of a transparent screen which was divided into meshes, each one of which measured $2\frac{1}{2}$ millimeters or approximately $3/32$ of an inch. This screen, devised to fit the photographic plate holder, was placed in front of the emul-

sion side of the plate. The resulting segmentation permitted us to measure in relation to each other the various points that appeared on the photograph. Although it was very desirable to have the meshes as small as possible, a finer division was tried and rejected, as it tended to obscure detail. The actual size of the retinal image is 30 millimeters or approximately $1\frac{3}{16}$ inches.

After such a meshed photograph was taken, which enabled measurement of the distance from the optic nerve to where certain blood vessels bifurcated, it became essential that the directional point where this occurred should also be noted. This



Schematic drawing by Dr. C. Adam Berlin

FIG. 2. SCHEMATIC DRAWING OF THE FUNDUS OR RETINA

The dark vessels are the Veins, the lighter ones the Arteries. The inner circle is the Papilla through which the Optic Nerve enters the Retina. The position of the various bifurcations, the number of branches of the Vein in the manner in which it emerges from the Papilla are different in every individual and are permanent through life. Arteries and Veins frequently cross and there is no regularity in their position to each other, but the same kinds of blood vessels never cross, which fact is useful in determining their nature.

As each square shown in the screen measures exactly two and a half millimeters in the original photograph, the measurement of the Veins and their position may be accurately determined no matter how much such photograph is enlarged.

The photograph of the Retina is taken through the screen and later subjected to a Protractor giving a circle of 360 degrees.

With the use of the Square Screen and the Protractor a bifurcation of a vein may be accurately located and numerically classified.

problem was solved by the use of an especially constructed transparent 360 degree protractor placed over the photographic positive, the center of this protractor being superimposed immediately over the cup or papilla of the optic nerve. In all calculations, the optic nerve was used as a fixed point, a central spot, or hub. With the known dimensions of the segmentations and the precise radiation angle, an exact localization of a definite point can be registered, no matter how much the photograph may be enlarged.

Anatomical data and charts by Dr. Friedrich Dimmer and Dr. Arnold Pillat, of Vienna, and also Dr. C. Adam, of Berlin, were placed at our disposal, but were chiefly photographs of diseased or pathological conditions of the eyes. The anatomical charts were of valuable service, but for the purpose of identification it is necessary that the optic nerve be taken in or near the center of the photographic image. This is an easy accomplishment when that objective is previously planned. The actual adjustment of the instrument in projecting a beam of light through the pupil into the eyeball and illuminating the retina takes but a few moments.

The entire background of the eye may be seen as a clear well lighted circular picture, and when the optic nerve is centered in the visual field, it is automatically centered on an exposed photographic plate in a reflex camera attachment. The taking of the photograph requires but a fraction of a second and practically while still observing the retina.

Both the veins and the arteries may be utilized in the measurement of their patterns, but it makes the classification less complex by selecting the veins, as these have a more distinctive appearance than the arteries, being larger and photographing darker. The veins and arteries may be used jointly, the veins given numerically an odd number and arteries an even one.

To further simplify the classification, it was deemed expedient to arbitrarily select the right eye as the one to be photographed. Both eyes may however be used, their individual patterns given a numerical value, one serving as an enumerator and the other as a denominator. Should the left eye be used, such selection must be specified.

With the aid of the known dimensions of the screen meshes and the angle determined by the protractor, the manner in which the vein enters the optic disc, the number of bifurcations of branches and their position and change of direction, are as easily charted as is a given point mapped out on the high seas by a navigator.

For the purpose of identification, only a slight anatomical knowledge of the optic nerve and blood vessels of the retina is required.

The optic nerve comes from the brain and enters the eyeball at the retina through a cup-like formation, termed the papilla. This is circular in shape as seen from the front. The optic nerve has a diameter of about 4 millimeters, the margin of the papilla being sharply defined. The veins and arteries divide either within the optic nerve or after they leave the papilla.

The vein and the artery send a branch upward and another downward, termed respectively the superior and inferior vein and artery. Both of these again subdivide, forming the superior temporal and nasal arteries and veins. The inferior branch likewise divides into the inferior temporal and nasal arteries and veins. In most instances as the vessels come out of the optic nerve, no trunk is seen, but two, three, or four branches emerge that have bifurcated within the optic nerve. A symmetrical configuration of these vessels is rarely seen. It is important to note that although an artery may cross a vein or a vein an artery, the same type of vessels never cross themselves. This is a differential point that may be of value when in doubt as to the type of a crossing vessel.

The manner in which the trunk or the branches of the blood vessels emerge from the optic nerve are quite numerous and of many combinations. They may, as a general rule, be divided into four broad divisions, which can be numerically classified in the following manner:

1. The branching takes place immediately upon the retinal surface of the optic nerve. Classification would be Plus One.
2. The branching takes place outside of the optic nerve. Classification would be Plus Two.
3. The branching takes place within the

optic nerve and only one branch emerges. Classification would be Minus One.

4. The branching takes place within the optic nerve and two or more of such branches emerge. Classification would be Minus Two.

5. Where the branching is not clear or where it cannot be determined if it occurs outside or inside the optic nerve, the classification would be Zero or 0.

It is further suggested that the superior papilla vein be given the numerical value of Two (2), the inferior papilla vein the value of One (1), their various branches to be designated by the letter T if a temporal vein, and by the letter N if a nasal vein. The point where the papilla branches is to be calculated by the meshes of the screen which serves as a measuring gauge. Their distance from the nearest outer rim of the optic nerve is to be given in millimeter numerical figures.

Following such notation, the protractor should be used and the angle where the bifurcation occurs should be noted. It is also desirable that the degrees on the protractor which are nearest the point to be measured, should be used in preference to a radiation line that is further away. The lowest point of the protractor should be at the 180 degree mark, the superior or higher point at zero or at the 360 degree marking. Such figures would, in this manner, also indicate in what quadrant of the retinal disc the measurement was taken.

All of these classifications are open to amplification, and as formerly ten fingers were necessary for skin ridge identification and at present only one is required, a further simplicity of this system may likewise be evolved.

The anatomical knowledge required



FIG 3 Plus one



FIG 4 Plus two



FIG 5 Minus one



FIG 6 Minus two

Schematic drawings by Dr C. Adam Berlin

These figures illustrate how the great variety in the courses of the retinal blood vessels occur. If the vein or artery divides within the optic nerve it is not the trunk but the branches that emerge from the papilla or optic nerve circle. There are numerous combinations observable. The figures above that show a cross section of the optic nerve are the four usual types commonly seen each however with many variations.

The primary classification is numerically suggested as

(Fig 3) The branching takes place immediately upon the retinal surface of the optic nerve

takes place outside of the optic nerve. Classification Plus Two
takes place inside of the optic nerve and only one branch emerges

takes place within the optic nerve and two or more of such branches
Two

Where the picture of the branching is not clear or where it cannot be determined if it occurs outside or inside of the optic nerve, the classification would be 0.

and general schematic outline of this new method of identification, is not to a layman, any more complex or confusing than is the fingerprint system with its bifurcations, radial and ulnar terminations, its cores, its delta, its loops, whorls, composites, arches, and other technical expressions.

What is true of the fingerprint system is also true of this new system, in that no two individuals have the same identification patterns. The many and great variety of blood vessel configurations makes it a mathematical certainty that no two retinal formations are identical. In thousands of photographs, none have been found the

same. Age or disease may change in tortuosity the lumen of the blood vessels, but their position and their correlation remain unchanged through life, and what is of greatest interest, they cannot be altered or effaced.

We offer this new system as a contribution to criminal science, and as an adjunct to the present fingerprint system of identification. We believe that it may render signal service in this field, and that in the science of anthropology it may also open the road to other research of benefit to mankind.

50 EAST 58TH ST.
1095 PARK AVE.

LABORATORY AIDS IN THE DIAGNOSIS AND TREATMENT OF SYPHILIS

Owing to the varied symptomatology and periods of latency in syphilis, laboratory tests become of particular importance.

I. *Chancre Fluid*. Exudate from any sore on the genitalia or suspicious lesion on other parts of the body should be examined for *Treponema pallidum* since the chancre may not be typical in appearance. In case medication has been applied to the suspected chancre, fluid obtained by puncturing one of the enlarged regional glands should be examined. Capillary tube outfits are available for the submission of such fluid to a laboratory. Properly collected specimens are usually satisfactory for dark-field examination for at least two or three days; hence they may be submitted by mail.

II. *Blood Specimens*. About 10 c.c. of whole blood should be submitted for complement-fixation (Wassermann) tests, not only when syphilis is suspected or when the findings will aid in the management of treatment, but also as a part of every physical examination. The findings may be of particular importance if the patient is pregnant.

III. *Spinal Fluid*. Neurological involvement may occur early in the course of a syphilitic infection. Also, the blood of some patients with neurosyphilis may fail to react in serological tests. Thus, the study of spinal fluid is frequently necessary. Ten cubic centimeters or more should be available for examination. In addition to a complement-fixation test for syphilis, a cell count, determination of the globulin content, and a colloidal gold test may be very helpful. The services of a near-by laboratory should be available for the latter tests.

Interpretation of Laboratory Findings. The results of any laboratory test must be interpreted in the light of the clinical manifestations. Thus, in all instances where unexpected reactions are secured, specimens

should be submitted for confirmation. A clerical or technical mistake may possibly have occurred.

The finding of *Treponema pallidum* in fluid from a lesion furnishes presumptive evidence of syphilis. Also, complete fixation (4+) with both cholesterolized and non-cholesterolized antigens indicates the probability of syphilitic infection. Except in the tropics where yaws occurs, reactions of this degree are almost never obtained unless syphilis is present. Partial fixation or reactions with one antigen only must be carefully evaluated. If the patient is known to have syphilis and is undergoing treatment, such reactions may have practically the same significance as more marked fixation of complement. Even partial reactions occur rarely with specimens from patients who have no history or clinical evidence of syphilis. Fixation of complement with satisfactory specimens of spinal fluid is usually interpreted as indicating syphilitic involvement of the central nervous system.

It is more important to keep in mind that negative findings do not exclude syphilis. Fixation of complement may not occur with specimens of blood until a month or more after the appearance of the initial lesion. Thus, a search for *Treponema pallidum* is of particular importance in view of the desirability of early treatment. Furthermore, blood from a certain proportion of patients with latent or tertiary syphilis may fail to react in serological tests.

Results of reliable precipitation tests can be interpreted in a corresponding manner. From New York State Association of Public Health Laboratories, Leaflet No. 6, May, 1935.

MATERNAL WELFARE

JAMES KNIGHT QUIGLEY, MD, FACS, Rochester

The mere discussion by this group of Maternal Welfare presupposes that there is a necessity for such a study, that the end results of child-bearing in this country are not what they should be. Thus, I think, is generally admitted, but little is to be gained from numerous laborious statistical studies unless some tangible constructive plans result which will be of practical aid in improving this deplorable condition.

The statement that the United States occupies a most unenviable place in the list of the nations of the world in regard to Maternal Mortality—fourteenth—is made so often as to have become commonplace. The rate of 6.3 maternal deaths per 1,000 births is contrasted with a rate of 2.98 for Holland, 2.74 for Denmark, and 3.12 for Sweden.

Up to quite recently we were loath to accept this next-to-the-last-place position and comforted ourselves with the statement that the rate for the United States was not comparable to most of the nations presenting a lower rate than ours because of different classifications for causes of death and different methods of obtaining statistics. It would seem from the facts shown by a recent investigation that, to use the parlance of the street, we have been kidding ourselves.

The investigation referred to was that done under the auspices of the Children's Bureau of the United States Department of Labor, from whose monograph, "Comparability of Maternal Mortality Rates in the United States and Certain Foreign Countries," comes this quotation:

This study of the comparability of maternal mortality rates of the United States and foreign countries is based on 1,073 deaths associated with pregnancy and child birth that occurred during the year 1927, including 997 deaths assigned to the puerperal state and 76 deaths assigned to non-puerperal causes by the United States Bureau of the Census. The distribution by cause of the 997 deaths was similar to that of all deaths in 1927 assigned to the puerperal state. The sample is, therefore, representative of the deaths so classified in the

United States during the year. Information in regard to 477 deaths that included one of every type and one of every combination of circumstances represented in the sample 1,073 was sent abroad and the deaths were classified as puerperal or nonpuerperal by the statistical offices in charge of classification of cause of death of 16 foreign countries in accordance with the rules in force in these offices. The countries making the assignments were Australia, Canada, Chili, Czechoslovakia, Denmark, England and Wales, Estonia, France, Irish Free State, Italy, Netherlands, New Zealand, Northern Ireland, Norway, Scotland and Sweden.

The study shows, first, That the methods of assignment in use in Australia, Netherlands, New Zealand, and Scotland are similar to that of the United States, and the official maternal mortality rates are directly comparable within a small margin of error, that under the method of Denmark a larger number of deaths would be assigned to the puerperal state and the rate for the United States would be significantly higher than it is now, that under the methods of the other countries included in the study—Canada, Chili, Czechoslovakia, England and Wales, Estonia, France, Irish Free State, Italy, Northern Ireland, Norway and Sweden—a smaller number of deaths would be assigned to the puerperal state and the rates for the United States would consequently be somewhat lower. Second, That differences in methods of assignment are insufficient to explain the high maternal mortality rate of the United States, as compared with foreign countries. The official figure of the United States, which in the last few years has exceeded that of every other country except Scotland, remains high no matter what method of assignment is used.

Even if the method of the country assigning the smallest proportion of deaths to the puerperal state were in use in the United States, the United States figure would still exceed that of all the countries except Australia, Canada, Chili, and Scotland. Rates for the United States estimated in accordance with the assignment procedure of the respective countries are in every instance except Scotland in excess of and are in five instances more than double the official rates of the countries themselves. No matter what method of procedure is used the United States retains an exceedingly high rate as compared with other countries.

We are not the only people seriously concerned over maternal mortality. England, where the rate of 3.8 in 1923 increased to 4.5 in 1933, 18 per cent in 10 years, conducted under the Ministry of Health a survey of 5,800 maternal deaths in England and Wales and published in 1932 an interesting report with recommendations. Belgium, with a rate of 5.5, and Germany, whose rate is 5.1, are exercised over the problem.

Here at home we have the much discussed New York Academy of Medicine report on maternal mortality for three years in New York City; the United States Children's Bureau report of a study of 15 states, published in 1933; and more recently the report of a three-year study in Philadelphia. In addition, the major question of Maternal Welfare was the subject of a large section of the White House Conference of a few years ago. Then there is the Joint Committee on Maternal Welfare, with representatives from the section on obstetrics and gynecology of the American Medical Association, American Gynecological Society, American Association of Obstetricians and Gynecologists, and American Child Health Association. And each of these organizations has its own maternal welfare committee. Unique in its scope, the Maternity Center Association of New York is engaged in a splendid work.

American medicine prides itself justly on the lowered death rates from most diseases; yet in the ten-year period 1915 to 1925 in New York State the deaths of women between the ages of 15 and 44 due to child-bearing were second—tuberculosis being first, heart disease third, and cancer fourth. Maternal mortality has decreased but little if at all in 20 years, in the face of improvements in every other branch of medicine and with larger sums being spent every year on medical research and education.

The fact that approximately 16,000 to 18,000 women die annually in the United States from conditions incident to child-bearing, that 100,000 infants die during their first month of life, and that there are another 100,000 stillbirths, is surely sufficient reason for bringing to bear all the resources of public health organizations and the medical profession in the attempt, first, to find the reason for this waste of

life, and then, in so far as possible, to prevent it.

Maternal Welfare includes in its program not only the prevention of maternal deaths but also of infant deaths and injuries sometimes worse than death, and, in addition, the prevention of injuries and infections in mothers. For every woman who perishes in this her greatest function many are rendered invalids from diseases and injuries due to the maternal state.

Blair Bell, of the Royal Infirmary of Liverpool, reports that for the years 1925-31, 47.3 per cent of gynecological operations were concerned with the relief of local injuries and infections and of 2,275 consecutive parous women seen in the out-patient department, 775, or 34 per cent, were suffering from disablement due to pregnancy and parturition.

At the Royal Samaritan Hospital for Women, Glasgow, in the years 1928-1930 7,734 patients were treated. Of these, 2,178, or 28.1 per cent, were treated for conditions caused by infection at childbirth, and 2,730, or 35.3 per cent, were treated for injuries caused at childbirth.

In the three reports upon the causes of death as determined by various investigating committees examined by the author, those of the New York Academy of Medicine, of the United States Children's Bureau of 15 States, and of the British Ministry of Health (totaling over 15,000 carefully studied fatalities), first and foremost stands puerperal septicemia. Since the days of Semmelweis and Oliver Wendell Holmes puerperal septicemia has been considered largely preventable, not entirely but for the most part. Sepsis caused 22 to 25 per cent of the deaths. Second, septic abortion—entirely preventable—caused 13 to 18 per cent. Third in order, albuminuria and eclampsia, the toxemic states which with good prenatal care are for the large part preventable, caused 11 per cent of the total in New York City and 26 per cent in the 15 States. The wide variance reflects, perhaps, the better prenatal care in a large city. Fourth, hemorrhage from various causes, placenta previa, ablatio, and post-partum hemorrhage, was credited with 9.7 to 14 per cent. Lastly, accidents of labor such as shock gave about 9 per cent, a constant in all three reports. If many of these causes of death are preventable in

any degree whatever, where does the responsibility lie?

The responsibility for better obstetrics is a divided one, which might be considered under six heads: The State, the Patient, the Medical School, the Hospital, the Medical Society, and the Physician.

1 *The State* In the larger sense the State should see to it that housing conditions in the great cities are improved, and under the work relief PWA program, something is being done along the line of slum clearance at present. It should provide prenatal clinics and hospitalization for the indigent where necessary. Whether one believes in the Russian program or not, the care of the parturient all through pregnancy and the puerperium is far superior to the treatment accorded in any other country. During the last two months of pregnancy and the first two of the puerperium the parturient case is taken from work and sent home. At delivery she is hospitalized and on return to work the child is under medical and nursing care for three years in a day nursery at the place of employment. One may say that the State does this from a purely selfish motive. Perhaps that is so, but the results will bear watching.

2 *The Patient* A distinct responsibility rests with the patient herself to seek out someone to supervise her care and watch over her during her pregnancy, labor and puerperium, whether clinic or private physician. She should return regularly to follow instructions and to report any unusual symptoms. Incidentally, she should, as an ex-patient in later years, refrain from retailing all the horrible superstitions, relics of medieval times, as to maternal impressions and stories of the terrible times other women experienced in having their babies. Patients of more than ordinary intelligence are subconsciously affected and frequently made miserable from such old wives' tales.

The time has long since passed when parturition was looked upon as a normal physiological process. Parturition in the United States in 1935 may be normal and physiological, nonetheless, the stress of life today renders too many pregnancies anything but normal. How this is to be put before the women of the country is something of a problem. If the dangers of child bearing are overstressed patients are

unduly alarmed, moreover, there has been enough popular magazine publicity of this sort by sensational lay writers already.

3 *The Medical School* For a long time in the curriculum of the medical school obstetrics played the role of stepsister to surgery and medicine. Today the teaching of this very important and major branch of medicine is improved but still far from ideal. Thousands of men are graduated yearly in this country who at best have seen but few complicated deliveries, and have actually managed none. On going into practice, often in a small community, the first case encountered by the beginner may be a complicated one, such as placenta previa or eclampsia. The schools are graduating too many physicians, yet the material available for teaching does not go round. Six months' residence on a fairly active obstetrical service is none too much experience, not only for the obstetrical specialist but also for the general practitioner who would do good obstetrics.

To quote from the report of the White House Conference:

Unfortunately, there is a lack of uniformity in the present requirements relative to the teaching of clinical obstetrics in the medical schools throughout this country, in contrast with the much more intensive bedside instruction given in almost all European schools. This lack of intensive bedside instruction may be attributed partly to the allotment of an insufficient number of hours to obstetrics in the curricula of some colleges, and partly to the absence of a large active correlated maternity service available for undergraduate teaching. Thoughtful obstetric teachers are advocating the unification of obstetrics and gynecology in medical schools and hospitals, more hours in the junior and senior years devoted to obstetrics, and the provision of more hospital obstetric beds for teaching purposes.

Palmer Findley has stated "A study of the curricula of our medical schools showed that in actual teaching hours the ratio of obstetrics to general surgery, exclusive of the surgical specialties was as four to eighteen." Yet it has been estimated that 35 per cent of the services of the general practitioner are apportioned as obstetrics, and the neophyte may be confronted with the most serious complications of pregnancy and labor, without an opportunity to evade responsibility. It therefore seems logical to urge that the medical schools should standardize their requirements in obstetrics before granting the degree of doctor of medi-

cine, to include the following prerequisites: Allocation of at least as many hours to clinical obstetrics as to clinical surgery; the provision of an adequate number of hospital beds and patients to furnish the necessary clinical material; detailed instruction in prenatal and postpartum care; repeated performance of obstetric operations on the manikin; supervision of the student's dispensary and hospital work by a competent obstetrician; personal delivery of at least 20 patients and attendance on the delivery of numerous complicated cases in the hands of a master obstetrician. It is quite evident that constructive reforms depend more on sympathetic co-operation and proper action on the part of institutional authorities than on any readjustments that are within the power and province of the teachers themselves.

In discussing a paper which gives a resumé of this report, Dr. P. Brooke Bland, of Philadelphia, declared:

If we could have placed in the statute books in every State in the Union a law requiring every student to receive three to six months' intensive training along sound obstetric lines in a Class A hospital, then, and only then will we turn out graduates of a high type, and only then will the present inordinately high morbidity and mortality in the United States be reduced.

We of an older generation have looked forward to the results of better teaching only to be disappointed in the sloppy obstetrics of fairly recent graduates observed when we are called in consultation. Compare, for instance, the preparation of our medical students with the practical experience of the midwife trained in the school for midwives in Amsterdam, Holland, where during a three-year course she sees a total of about 1,800 cases and delivers 100. The training of the medical student in Holland extends over seven years, the training in obstetrics both theoretical and practical is more thorough than it is here. It commences in the fourth year and continues for three years, and the student must deliver at least 20 cases before graduation.

This responsibility of preparing our graduates thoroughly is a joint responsibility of medical school and hospitals providing internships.

4. *The Hospital.* A two-fold obligation rests with the hospital. First, in training interns, and, second, in the care of the patient, a general hospital should offer a

mixed or rotating service to interns with the amount of time allocated to obstetrics equalling that spent in the medical or surgical wards. Any hospital has a distinct obligation to train its interns. Departmental and staff conferences in which the intern takes a part by presentation of cases and participation in the discussion to supplement the technical instruction should be a part of this training. The intern should, of course, be permitted to do operative deliveries, after training, and always under the supervision of an attending staff member.

The paramount obligation of the hospital is to furnish facilities for the safe conduct of labor and the puerperium. The author is not in agreement with Dr. De Lee that safe obstetrics can be done only in the specialized Lying-In Hospital. Rather, it is likely that any general hospital with a separate obstetrical department with separate medical and nursing staffs can afford as safe care as the hospital taking only obstetrical cases. Conversely, the general hospital where obstetrical cases are delivered in surgical operating rooms, where patients are often domiciled in rooms adjacent to septic surgical or medical cases, and where members of the resident staff and nursing force care for both types of patients, is not so safe a hospital as is the home for delivery.

Another responsibility of any hospital zealous of its reputation is to exercise a check upon the over-anxious obstetric operator by insisting upon consultation in cases requiring major operative interference. If this were done fewer Cesarean sections, versions, and difficult forceps operations would be performed for trivial indications, for undeniably more sepsis, hemorrhage, and shock follow where interference has been practiced. This plan has been followed in several instances in New Jersey¹ with a marked reduction in the number of operative deliveries, as well as mortalities. It is also in operation in the hospitals of the 5 largest cities in Ohio, where it is known as the Cleveland plan.

Hospitals should exclude from their delivery rooms nurses and interns suffering from upper respiratory infections or throat carriers of streptococci, as this source of contamination or droplet infec-

tion has been definitely responsible for several epidemics of puerperal fever resulting in fatalities

5 *The Medical Society* The medical society could and should do something in the way of postgraduate courses—"refresher" studies, as they are styled by the English. This was done in New York State about 10 years ago under the auspices of the Department of Maternity, Infancy, and Child Hygiene of the State Department of Health, and more recently by the State Medical Society. These courses were well attended, moreover, the author believes they bore fruit. They should be continued and enlarged upon. In these courses not only should the newer ideas in pathology, diagnosis, and treatment be presented, but, more important still, emphasis should be put upon conservative obstetrics, and repeated again and again.

6 *The Physician* He has played a part in three of the previous groups. In the medical school as a teacher and in the hospital as one who helps to shape its policies and as an instructor and example to the House Staff.

I wish to discuss his responsibility as the obstetrician to the patient. The practice of midwifery is not alone for the man limiting his work to this branch and its allied sister gynecology. Much must still be done by the general practitioner, who can practice obstetrics as competently as anyone. The author numbers several such men among his acquaintances. However, if the man in general practice is to assume the responsibility for the care of women during pregnancy, labor, and the puerperium, regardless of what the remuneration may be (and this is sometimes a factor), let him be prepared for it to put his best foot ahead, lest he grow to treat the obstetrical side of his practice as a necessary evil. When confronted with complications beyond his knowledge or skill to cope with he should be willing to have consultation.

To say that adequate prenatal care is necessary to good obstetric practice seems redundant in the face of the mass of propaganda waged in its behalf in the past fifteen years. Yet many women today receive little attention during their pregnancy and a still greater number receive none at all. Repetition can only be effective in this. The minimum standards of

prenatal care as outlined by the State Department of Health or the Federal Children's Bureau should be more widely circulated. These standards ought to include: (1) A general physical examination, with measurement of the pelvis, (2) a visit to the doctor at least every three weeks up to the seventh month and fortnightly after this time, (3) observations of blood pressure, weight, and urinalysis, (4) an abdominal examination to determine the progress of the pregnancy, (5) the condition and position of the fetus should be made at least every other visit, and the case should be questioned as to untoward symptoms such as headache, edema, and constipation, (6) on her first visit the hygiene of pregnancy as to diet, rest and exercise should be outlined, (7) a Wassermann test and Hgb determination should be routine.

The fault with maternal welfare work has been the neglect of natal or delivery care. From the reports cited above puerperal septicemia is the chief cause of death and the most intensive prenatal care will avail the patient but little if there is infection at delivery. Deaths from sepsis have not shown a decline for 10 years or more, in fact, in New York State the death rate from sepsis in 1933 was higher than in 1915, 18 years ago. Autogenous infection *can* occur.

There are fatal cases of sepsis where the patient had no examination during labor, no laceration and a spontaneous delivery, but such cases are very rare. In the vast majority of cases it is known that infection is introduced from without. This means a faulty aseptic technique or meddling—some interference or both.

The preparation of patient and physician should be as painstaking as for major surgery. Careful scrubbing of the arms and hands for 10 minutes and the use of gloves, gown, cap, and face mask should be routine. Most labors can be conducted by rectal examinations and in any case the number of vaginal examinations should be reduced to a minimum. Nature is ordinarily kind, and with patience and a little more time spent, a spontaneous delivery is frequently the reward. We have heard too much of prophylactic forceps and routine version and extractions. Cesarean section should not be considered too lightly. Skeel and Jordan collected a total of

4,402 cesareans done in three cities—Cleveland, Brooklyn and Los Angeles. The average mortality was 7 per cent, altogether too high and attributable probably more to improper selection of cases than to faulty technic.

In the Children's Bureau report of 15 states of 7,234 maternal deaths, 2,649 cases, or 37 per cent, had had an operation directed toward delivery, and 1,131, or 16 per cent, had had an operation other than for delivery, such as packing the uterus, curettage, and so on. The errors brought out were not only errors of technic but of judgment, judgment which is acquired only by experience and study.

Good postnatal care is of no less importance than prenatal and delivery care. The object of good obstetrics should be to return the mother to a condition of health as good or better than before she conceived and with a living, healthy baby. All lacerations should be carefully repaired at the time of delivery and the patient should have a careful pelvic examination at the end of two weeks and another at the end of six or eight weeks, at which time abnormal conditions such as subinvolution, retroversion of the uterus, and cervical erosions should be treated. The cancer specialist states that cancer might be prevented in many cases if puerperal cervical erosions were properly cared for (usually by cauterization).

Preventability

To what degree are deaths due to child-bearing preventable? In the three surveys mentioned above it was found that from 20 per cent to 30 per cent of the fatalities were due to septicemia and that 12 per cent to 26 per cent were attributable to the toxic states. The conclusions in the report of the British Ministry of Health are appropriate in respect to this:

False hopes would be raised if it were suggested that all maternal deaths are preventable. Changes in social life necessary to raise the standard of health and physical development of the women of the nation can come only with time; great advances in medical knowledge must be made before many of the risks of childbirth can be eliminated; even then the factor of human fallibility will remain. Nevertheless, we are confirmed in the opinion expressed in our Interim Report that at least half the deaths which have come under review could have

been prevented had due forethought been exercised by the expectant mother and her attendant, a reasonable degree of skill been brought to bear upon the management of the case, and adequate facilities for treatment been provided and utilized.

And again from a report by Dr. Woodbury, formerly director of statistical research of the Children's Bureau, United States Department of Labor:

The preventability of maternal mortality is considered in the light of the analysis of causes and causal factors, by the Children's Bureau report. "Almost all the mortality from puerperal septicemia is preventable," the report states. "Puerperal septicemia is infectious in origin, and its prevention depends upon the rigorous observance of asepsis. The Australian committee appointed to study the causes of death and invalidity in the Commonwealth states: 'Puerperal septicemia is probably the greatest reproach which any civilized nation can by its own negligence offer to itself. It can be prevented by a degree of care which is not excessive or meticulous, requiring only ordinary intelligence and some careful training.'"

One more quotation, this one being from the Academy of Medicine report:

It has seemed clear throughout that the rate of death was unnecessarily high. The high percentage of preventable deaths from each and all of the causes was ample proof of that fact. *It was estimated that two-thirds of all the deaths studied could have been prevented if the care of the woman had been proper in all respects.*

Where the lack of proper care was ascribed to failure on the part of the attendant, it is probable that this failure was not attributable to neglect or carelessness. Rather, the ignorance and insufficient training of the attendant prevented him from giving the high quality of care which he was attempting to provide for his patient and, further, prevented the understanding on his part of the fact that he was incapable.

The rate of deaths from puerperal causes is high, and unnecessarily so. It has shown no tendency to decrease during the last twelve years, in spite of progressive improvement in the methods of treatment and the increased hospitalization of the parturient. This fact is more striking when the falling rate for other types of conditions, such as infant mortality and the large groups of the communicable diseases, is considered.

Certain elements have been recurrently striking in relation to every puerperal cause of death and seem to be contributory to the

production and maintenance of the persistently high rate. They may be briefly reviewed, with suggestions for possible improvement.

First of all, it was evident that prenatal care was inadequate and improper. The patients repeatedly failed to seek prenatal care. Often, if they did, it was very late in pregnancy and return visits were neglected. This was particularly true of patients from the lower economic groups.

It was plain that this arose out of the ignorance and misinformation still widespread among the lay public in spite of persistent efforts which have been made to combat it. It was apparent that women did not know the necessity for prenatal care, and failed to understand just what constitutes proper prenatal care. Many patients were ignorant of the gravity of certain apparently mild symptoms which indicated the presence of serious abnormalities. Persistent vomiting was disregarded, repeated vaginal hemorrhage neglected, pain and bleeding early in pregnancy and the milder symptoms of toxemia overlooked.

Many patients did attempt to obtain prenatal care. They consulted their physicians early and returned regularly. But the attendant failed to give proper care. Physical examination was careless and incomplete. Contractions of the pelvis were overlooked. The severity of complications was repeatedly underestimated and they were improperly treated.

The high incidence of operative interference during labor was an important factor in the result. More than 45 per cent of the deaths in this series, exclusive of abortion and ectopic gestation, followed operative deliveries and was greatly in excess of that for spontaneous deliveries.

Finally from the conclusions of the three-year Philadelphia Report:

Hospitals, medical societies, and allied agencies should assume more responsibility regarding the factors tending to reduce maternal mortality in Philadelphia. Such organizations have wide influence both with the medical profession and the lay public, and they should embrace every opportunity to advance the practice of obstetrics through co-operative education and legislation.

In order to meet the situation, changes are necessary in the attitude and procedure of the various groups involved, and therefore, the following specific recommendations are made:

Physicians. The responsibility for the high maternal mortality rate in Philadelphia rests primarily with the medical profession, hence the problem of reducing it belongs to the physicians. They must assume leadership

in the double rôle of raising the educational standards of physicians, nurses, and midwives, and of informing the laity of the need of adequate maternity care.

Physicians must instruct the lay public in the dangers of induced abortion. The simple and clear explanation of the infections following unclean abortions must be emphasized. Its dangers must be warned against if any progress is to be made in combatting this prevalent and increasing sociomedical problem.

Abortions, whether self-induced, criminal, or spontaneous, with resulting septicemia, are the largest single puerperal cause of death in Philadelphia. For these deaths medical practitioners cannot hold themselves responsible, as patients come to them as a rule in a moribund condition. Nevertheless, any single factor resulting in an unnecessary death every week in this city requires medical leadership to meet the situation. In any educational program on prenatal and maternal care the danger of abortion should be stressed. Education will help, but it alone will not eliminate this cause of death.

The fact that the largest proportion of these deaths is among married women, many of whom have living children, would indicate that under present economic conditions the difficulty of providing for children and the desire to give them better opportunities may be the fundamental cause. A number of foreign countries have faced this problem either by allowing the free giving of contraceptive information, or by legalizing abortion.

The committee is not in agreement as to the desirability of changing the law in regard to either of these procedures. Concerning the legalization of abortion, the outstanding example is that of the U.S.S.R. The committee has considered a large amount of Russian material on this subject. The evidence of the advisability of this measure seems overwhelming, and it is hoped that within the near future an impartial analysis will be made of the results, especially in relation to the ability of those having undergone this operation to bear children. Such a study by qualified obstetricians, gynecologists, and statisticians is suggested.

More opportunities should be offered to the physician who is desirous of advancing himself in the art and science of obstetrics. Unfortunately the material available for this purpose is poorly marshalled in this city. In some of the maternity services of the larger general hospitals the material appears sufficient to warrant a residency in obstetrics for the education of young specialists without seriously interfering with the training of interns.

There is a dearth of seminars and demonstrations in obstetrics open to the general practitioner. If such courses were arranged regularly and advertised sufficiently, possibly in connection with the current teaching of undergraduates, they might well serve as stimulating refresher courses to the general practitioner.

It has been estimated that from one-half to two-thirds of the fatalities in some 15,000 cases investigated were preventable. To be very conservative, if one-quarter, or 25 per cent, could be prevented in the United States alone, 4,000 women could be saved, to say nothing of the saving of infant life by a reduction in the 100,000 stillbirths and 100,000 neonatal deaths. There is more than the humanitarian urge to consider. The United States, through a constantly falling birth rate and limitation of immigration, has reached a stable population, and its population will fall should the present trend continue.

Recommendations

An improvement in the existing conditions can only be brought about by education of the general public and those entrusted with the care of patients, first as to the need for reform and second as to how to accomplish it.

The public must be taught to seek prenatal care and to seek it early. It was found by the committee responsible for the 15 States' report of the Children's Bureau that of the 7,537 women on whom a report as to prenatal care could be obtained, 54 per cent had had *no* prenatal examination by a physician, and in only 1 per cent of those having prenatal care was it up to the standard that it is the right of every pregnant woman to have and to demand.

Two suggestions recently offered to better conditions are: (1) A return to home deliveries; (2) more deliveries by midwives. The experience of Rochester, a city of 350,000, as evidenced in a survey of maternity facilities last year, would not seem to support either suggestion, for Rochester has probably the highest proportion of hospital births in the United States, almost 80 per cent, and a very low number of cases cared for by midwives, 68 in 1933 (it was 750 19 years ago), and yet the maternal death rate was 4.1 as against 6.3 for the United States and 6.2

for New York State. On the contrary, operative deliveries *should*, it seems to the author, be done in the hospital and preferably the delivery of all primiparae.

To facilitate the study of this problem puerperal fever should be a reportable disease. (New York State three years ago removed it from the list.) More care should be taken in writing death certificates and more autopsies should be done.

Hospitals which furnish accommodation to obstetrical cases should be inspected and if found wanting should be prevented from receiving patients until up to the standard. That conditions could be improved is proven by the mortality rates for some sections and for some hospitals and out-patient clinics where as the result of an attempt at the ideal the mortality rate is lower than that of the country as a whole. Williamson, for example, reported for the Cornell maternity out-patient clinic in New York City a mortality of 3.7 per 1,000 for 13,356 confinements in tenement homes, while back in 1918 the New York Lying-In out-patient mortality rate for 69,081 home deliveries was only 3.1 per 1,000 (or about one-half the rate for the United States). Some hospitals have reported series of a large number of hospital deliveries without a death from sepsis. The author believes much can be accomplished in a definitely constructive way by local maternal welfare committees with the County as a unit. The program of such a committee might be set up as follows:

- I. Survey of Maternal facilities of the County.
 - a. Prenatal clinics.
 - b. Hospitals.
 1. Is the obstetric department a separate unit.
 2. Does it have an obstetric staff.
 3. Does it have a resident or interne staff.
 4. What is its record as to infant and maternal mortality.
 - c. Public Health Nurses Association.
 1. Does it conduct mothers' clubs.
 2. Does it offer ante and post natal visiting.
 3. Does it offer nursing and delivery care in the home.
 4. Does it offer prepared packets of sterile goods to physicians for home delivery.
 - d. Health Bureau for Maternal Death Rates.

- II. Survey of all maternal deaths in the county, with inquiry as to all the contributing causes.
- III. Co-operation with Public Health Nursing Association and other Public Health Agencies and mothers' clubs.
- IV. Education of the public through mothers' clubs and radio broadcasts.

In addition to members of the County Medical Society such a committee should have representatives from the Health Bureau, Hospitals, Public Health Nurses Association, Tuberculosis and Public Health Association, and Mothers' Clubs.

Conclusions

Let us not become discouraged by the apparent hopelessness of the task. It is

formidable, and yet even greater battles in Public Health have been won. Diphtheria, for instance, has been almost eliminated.

In the last analysis the author believes that improvement will not be sudden or spectacular but will come only from continued effort—and chiefly in two ways: (1) Education of women to seek prenatal care early; (2) in the practice of conservative, sane, clean obstetrics.

26 SOUTH GOODMAN STREET

Reference

1. Cosgrove, Samuel A.: Regulation and Control of Obstetrical Practice in Institutions of Non-Staff Physicians, *Bull. Amer. Coll. Surg.* 19:12.

SALES OF DIATHERMY MACHINES TO THE PUBLIC

The Committee on Physical Therapy of the Medical Society of the County of New York warns the public against attempts of small sales concerns to sell electrical apparatus known as diathermy machines for self-use by sick people, through advertising over the radio and by personal letters, says *The New York Medical Week*.

A typical advertising claim of one of these firms reads as follows: "If you are troubled with the terrible pains of Rheumatism, Lumbago, Sciatica, Neuritis, Arthritis, Bronchitis, Asthma, Pneumonia, Hay Fever, or other similar ailments, get in touch with us at once, because we can help you with our marvelous electrical apparatus called the ——— Diathermy Machine." "The word diathermy means heating through. The heat that emanates from the electrodes connected with this machine penetrates deeply into the affected tissues and inner organs giving immediate relief. We have seen some bedridden with rheumatism so severe that they could not move around or attend to their daily work, yet after a few treatments of this Diathermy they found themselves so greatly relieved that they were able to resume their work."

It is a fact that diathermy treatment is used by competent physicians in many chronic ailments but no lay person can diagnose his own illness and decide that it needs diathermy; furthermore, not even a small diathermy machine is safe in inexperienced hands, for severe burns through its use have occurred. It takes expert handling and a powerful apparatus to get real penetrating heat; all a lay person can do with a small diathermy machine is to warm up

the skin to a mild degree; this may give about as much relief as would a bottle of liniment for twenty-five cents, or a heat lamp for two dollars—no more. To invest one hundred dollars to get the same relief by one of these machines is the height of folly. In patients in whom really effective diathermy is advisable, results are achieved in from six to twelve treatments in the average case and these can be rendered by a competent physician for less money and with much greater safety and efficiency than it costs to buy one of the toy machines. It must be remembered, also, that in most cases full success depends on additional treatment measures, such as regulation of habits, diet, drugs which only the experienced physician should advise.

The crafty salesmen of concerns advertising such inefficient diathermy appliances will, of course, sell their toy machine to any persons, whether they need it or not. There is on record a case of a poor laborer with advanced heart disease and swollen legs who was told by a salesman that he could safely apply diathermy for this condition and was inveigled into spending one hundred and twenty dollars for an apparatus; in another case, a woman with absolute hopeless advanced crippling rheumatism was promised relief, and her last one hundred dollars were taken.

Approximately 5,000 New York state physicians have qualified to act in workmen's compensation cases, it has been announced by Elmer F. Andrews, state industrial commissioner. There are about 20,000 physicians practicing in the state,

THE TREATMENT OF A TYPE OF MALNUTRITION (SIMMOND'S DISEASE LIKE) WITH PREPITUITARY GROWTH HORMONE

LOUIS BERMAN, M.D., *New York City*

The use of insulin in the treatment of malnutrition in infants, children, and adults has become accepted as definitely valuable. One of the first to use it was Pitfield¹ who reported in 1923 on its good effects in two cases—one a baby of four months, another of five months. This report was followed by one by Barbour² who treated 40 malnourished infants and children, all of whom showed good increases in weight which persisted even after the insulin was discontinued. Similar reports of the treatment of malnourished children were published by Fischer³ and Rogatz and Green⁴ and Robbins.

In adults, Falta⁵ in 1925 was one of the first to employ insulin in the treatment of malnutrition. Since then, numerous papers have appeared both in Europe and America on its value in overcoming the resistance to weight increase both in primary malnutrition and in that secondary to tuberculosis and other chronic diseases. Among more recent publications may be mentioned those of Short,⁶ Nichol,⁶ and Metz.⁷ Short used it in seven cases of malnutrition in association with a high caloric diet. All of his patients reacted with a gain of weight, an increase in appetite being characteristic. Metz reported on its use in asthenic, undernourished, visceroptotic individuals who have resisted other therapeutic measures, patients with a constitutional asthenia, and poor nervous and physical stamina. Appel,⁸ Farr, and Marshall employed it in the treatment of malnutrition associated with psychiatric disturbances. In 33 patients who had failed to gain weight on the usual fattening measures, the injection of insulin 30 minutes before meals produced the desired result. They received about 4,000 calories a day with about 350 grams of carbohydrate.

Insulin was undoubtedly proved of great value in certain cases of malnutrition. But not all types or problems of malnutrition will yield to it. And besides, there are definite objections to it. The

danger of a hypoglycemic reaction must always be kept in mind. It has an accumulative action which may express itself as a hypoglycemic crisis at any time. Besides, there is the inconvenience of the injections which have to be given or taken three times a day. And the large amount of carbohydrate in the diet often proves cloying in spite of the stimulation of the appetite by the insulin.

It is a fundamental principle of nutritional physiology that a gain of weight may be caused by a preponderance of the constructive processes of anabolism, in the broader sense of the word, over the destructive reactions of catabolism. For that reason it seems that the problem of malnutrition in certain cases might be approached by checking on the condition of the anabolic mechanism.

Recent work on the pituitary gland has made it outstanding as the center for the manufacture of the anabolic hormones. Removal of the pituitary produces a cessation of growth. Emaciation is one of the characteristic signs of the destructive disease of the anterior lobe of the pituitary gland which has come to be known as Simmond's disease.¹¹⁻¹⁶ One of the outstanding symptoms of this syndrome is a loss of the subcutaneous fat with consequent shrinking of the skin and muscle tissues which produces a mummy-like appearance in the patient. Also in the form of hypopituitarism known as the Lorain type of infantilism, the individual is not only undersized for his age, but also underweight for his size. On the other hand, in acromegaly there is a definite increment in the cutaneous, subcutaneous, muscular, and osseous as well as visceral tissues, which might be called a hypernutrition, as the other might be denominated a hyponutrition. Clinically these facts can be interpreted as signifying an important influence of the prepituitary upon the anabolic processes of metabolism.

Experimentally it was first shown by Evans and Long in 1921 that alkaline

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aqueous extracts of the prepituitary contain a substance which has come to be known as the Growth Hormone. This growth hormone can, in experimental animals, produce effects comparable to what might be expected of a hormone capable of correcting the clinical subnutrition noted in those suffering from deficiency of the prepituitary. When it is not present in sufficient amount, growth ceases. By injection into a young rat or dachshund, an experimental gigantism or acromegaly may be produced. It seems to be a product of the acidophile cells and is not excreted by way of the kidneys. Collip¹⁰ has reported that he has obtained it in a concentrated form which he calls the Q extract. This can produce quickly a positive nitrogen and calcium balance. The growth hormone then has shown itself capable of anabolic effects in experimental animals. And in fact its influence upon weight has been used as a means of standardizing it.

It appeared possible that certain cases of malnutrition might be dependent upon a relative insufficiency of the prepituitary growth hormone, or might at any rate be assisted by its administration. Twenty-four cases were selected because they seemed to present types of pituitary insufficiency. They all complained of being definitely underweight and malnourished with fatigability and lack of resistance to emotional disturbance, and various visceral, e.g., digestive symptoms. They had all been subjected to high caloric, high carbohydrate, high fat feeding, some with additional rest periods. The gain of weight had been slight or only temporary.

As this is a preliminary report, the clinical findings will only be summarized. There were 16 females and 8 males. The basal metabolism of all fell within the normal prediction limits, although tending to be on the lowest levels of the minus side. The fasting blood sugar of all of them was consistently less than 80. The blood uric acid was abnormal in that it was either above 3.5 or below 2 mgs. per 100 c.c. The blood urea tended to be low as did the nonprotein nitrogen. They all showed a marked diminution of the subcutaneous fat, and in addition, a marked diminution of muscle substance as well as skin substance. All of them were very sensitive to insulin, the admin-

istration of five units provoking a fairly marked reaction. In some of them, an insulin course had been attempted but could not be continued on account of the marked reaction to it. One cubic centimeter of a standardized prepituitary extract containing the so-called growth hormone was administered, two or three times a week. At the same time a high protein, high calcium diet was advised, as it has been shown that the prepituitary anabolic hormone facilitates the utilization of amino acids and tends to produce a positive calcium balance. Satisfactory weight gains and a marked improvement in the general conditions were produced as shown in the following table:

1. 95-120	13. 118-150
2. 112-148	14. 130-160
3. 135-172	15. 75-108
4. 80-128	16. 102-135
5. 107-142	17. 110-132
6. 98-125	18. 120-146
7. 102-120	19. 106-140
8. 112-138	20. 88-110
9. 120-164	21. 125-140
10. 105-152	22. 116-152
11. 52-76	23. 98-126
12. 115-148	24. 128-154

Whether these individuals represented mild forms of the extreme malnutrition which occurs with the failure of the prepituitary known as Simmond's disease is very difficult to say. Reports show that cases of this type have been considerably alleviated by the administration of extracts of the prepituitary. The biochemical data reflect those that have been found associated with deficiency of the prepituitary gland. At any rate, there would appear to be a type of malnutrition in children, adolescents, and adults dependent upon a relative insufficiency of the so-called growth or anabolic hormone of the prepituitary which can be remedied by the administration of the appropriate hormone containing extracts.

Summary

Twenty-four individuals, with malnutrition, sensitivity to insulin, a low blood sugar, and low blood nitrogen, simulating the clinical and biochemical picture of Simmond's disease, were treated with a standardized prepituitary extract con-

taining the growth hormone. There was an average gain of about 32 pounds in three to six months and a corresponding

improvement in the general fatigability and asthenic condition.

1050 PARK AVENUE

References

1. Pitfield, R. L.: Insulin in Infantile Inanition, *NEW YORK STATE JOURNAL OF MEDICINE*, 118:217, 1923.
2. Barbour, O.: Use of Insulin in Undernourished Nondiabetic Children, *Arch. Pediat.* 41:707, 1924.
3. Fischer, L., and Rogatz, J. L.: Insulin in Malnutrition, *Am. J. Dis. Child.* 31:363, 1926.
4. Green, H., and Robbins, G.: Insulin in Infant Feeding, *Boston M. & S. J.* 194:162, 1926.
5. Short, J. J.: Increasing Weight with Insulin; Preliminary Report, *J. Lab. & Clin. Med.* 14:330, 1929.
6. Nichol, E. E.: Use of Insulin in Fattening Lean Individuals, *J. Florida M. A.* 16:29, 1929.
7. Metz, R. D.: Insulin in Malnutrition; Preliminary Report, *J.A.M.A.* 96:1456, 1931.
8. Appel, Farr and Marshall: Insulin Therapy in Undernourished Psychotic Patients; Preliminary Report, *J.A.M.A.* 90:1788, 1928.
9. Falta: Insulin Treatment and Adiposity, *Wiener Klin. Wochen.* 38:757, 1925.
10. Collip: The Anterior Pituitary Lobe (Fractionation of Active Principle), *Lancet* 1:1208, 1933.
11. Simmonds, M.: Ueber Hypophysisschwund mit Todlichem Ausgang, *Deutsche med. Wchnschr.* 40:322, 1914.
12. Simmonds, M.: Ueber Kachexie hypophysaren Ursprungs, *Deutsche med. Wchnschr.* 42:190, 1916.
13. Simmonds, M.: Atrophie des Hypophysenvorderlappens und hypophysare Kachexie, *Deutsche med. Wchnschr.* 44:852, 1918.
14. Graubner, W.: Die hypophysare Kachexie (Simmondssche Krankheit), *Ztschr. f. klin. med.* 101:249, 1925.
15. Smith, P. E.: Disabilities Caused by Hypophysectomy and Their Repair: Tubercular (Hypothalamic) Syndrome in Rat, *J.A.M.A.* 88:158, 1927.
16. Calder, R. M.: Pituitary Cachexia (Simmond's Disease Treated with Anterior Pituitary Extract), *J.A.M.A.*, 98:314, 1932.

IMPORTANT PUBLIC HEALTH GATHERING

Leaders of public health and preventive medicine from every state of the union and from several foreign countries are to attend the sixty-fourth annual convention of the American Public Health Association to be held in Milwaukee from Oct. 7 to 10.

Workers in all fields of public health, medical men, nurses, specialists in research, and others in allied activities, are to be among the 3,000 delegates expected at the convention.

Important developments of the year in preventive medicine, in the extension of public health work, and in the constant war on contagious disease will be unfolded at the gathering.

Simultaneous with the association's sessions, ten other closely related organizations are to convene. They are: Association of Dairy, Food and Drug Officials, American Association of School Physicians, Association of Women in Public Health, Conference of State Sanitary Engineers, Conference of State Laboratory Directors, Conference of Wisconsin Health Officers, State Registration Executives and State Directors of Public Health Nursing, International Society of Medical Officers of Health, and National Committee of Health Council Executives.

Over 400 papers are to be presented, dealing with such widely varied subjects as mental hygiene, diphtheria and scarlet fever immunization, poison in food, public

sanitation, treatment of sewage and polluted waterways, public health engineering, planned milk control, laboratory studies with toxins and vaccines, tuberculosis, milk-borne disease, water purification, new methods in reporting vital statistics, industrial hygiene, and food and nutrition.

There will be authoritative presentations on amoebic dysentery, hemolytic streptococci, whooping cough, gonococcal infection, tuberculosis, and undulant fever. A large number of papers are to be presented on filterable viruses, and on prophylactic and therapeutic vaccination. Recent progress in biological products, and research accomplishments of the year in the milk and dairy field, have also been assembled for the program.

A dangerous feature of the schemes for state medicine is the fact that the "brain trusters" are mostly laymen. As President Thompson of the Texas State Medical Association puts it: "They do not know the difference between quinine and condition powders, botts and boils, spavin and sprue. Hence this fog, hence this confusion and these unsound, unsafe medical schemes to take care of the sick. That the shoemaker should stick to his last is sound doctrine. The most dangerous person in the world is he who does not know, and does not know that he does not know."

SCHOOL HEALTH AND THE PHYSICIAN

WILLIAM PAUL BROWN, M.D., *Albany*

Division of Health and Physical Education State Education Department

There are phases of the activity of schools in stimulating health action by the pupils that are not clearly understood by many. The medical profession has shown an excellent attitude of co operation with all agencies promoting the health of the upcoming generation. This has opened the way remarkably for team work by all physicians in the use of the medical findings of the school physical examination.

School physicians continue to have their basic aim unchanged from that with which the work started. It is designed to discover abnormal conditions in the children and in the school personnel and aims to immediately refer these folks to their own physicians for further adequate diagnostic study and treatment. The school study proposes not to reach the diagnosis in the thoroughness of detail that can be had in the doctor's office or in the hospitals, it merely detects the need for a full diagnosis. Even though the further study may not uncover a real basis for the suspicion, yet the fundamental reason for the referring of the case is still valid.

The State Education Department has, through its Medical Inspection Bureau, made energetic efforts to design the plan approved for this work in such fashion as to harmonize with medical ethics and with public health. This friendly attitude has borne results and it is with pleasure that we note the cordial response of physicians toward the discovery of early indications of a need for medical care.

A reversal of the diagnosis by the family physician is often detrimental to the further co operation of the family concerned. Certainly no one would expect that we should not disagree concerning many angles of these referred cases. However the effect upon the public of radical disagreement and of spectacular wording to the family concerning the disagreement can have wide harmful effects. Such intimate personal contact with the failure of doctors to agree has a profound influence on subsequent conduct of the family when other urgent medical matters

arise for their decision. Rather we should preferably conceal our disagreement and postpone the treatment than call it absolutely useless. The recent study described by Franzen¹ where 1,000 average school children at age 11 showed 611 already having had tonsillectomy and wherein three school medical examiners arrived at the recommendation for tonsillectomy in 324 more of the 1,000, left a total of only 65 out of the 1,000 children in whose cases tonsillectomy had not yet been advised. This certainly opens the way to disagreement, but we can temper our wording of our disagreement so that the public is not awkwardly reminded of the incompleteness of our diagnostic data.

School health service is not designed to include treatment. The school is not prepared to defend malpractice suits which could occur from medical practice concerning pupils. The school physician who gives advice or treatment is doing so upon his own responsibility. The main effort of the school physician is devoted not to advice but to a salesmanship in convincing the pupil that the condition noted is in need of medical attention. Such friendly activity is fortunate. If such service were not available I am sure the local medical groups would be active today in devising some scheme whereby these youngsters could be rounded up for such study before their abnormalities had progressed to a severe or incurable status.

There is need for more attention to minor but chronic health errors in the average family. A recent lay study completed by O'Neill and McCormick² has uncovered a surprising prevalence of health behavior mistakes in average children. This study in 58 areas of the State covered health behavior for the 24 hours in 3,512 children.

Undoubtedly in the instances where a disagreement occurs about tonsils, malnutrition, or posture, and so on, there should be room for the alert physician to investigate the whole picture of health behavior for such a child. It is likely that

he can find a real reason for skillful guidance of the family concerning some perhaps untreated abnormality.

These average children revealed 43 per cent showing evidences of over-fatigue during the school day. Fifteen per cent have not been taught that bedtime is a regular time rather than the occasion for nightly argument and wheedling of parents. Fifty-one per cent of the total showed a schedule giving insufficient time for adequate sleep. These difficulties should decrease with age, but strangely they do not.

Twenty per cent gave history of drinking practically no milk during the week. One-quarter drink tea or coffee daily. Eggs, a desirable food for children, were not eaten more than once a week by 70 per cent of the children. Eighteen per cent eat no fruit. Candy is had frequently between meals and this increases with age, for 74 per cent of the older group told of eating candy at home and at school almost daily between meals. The periodic use of laxatives was common among two-thirds of these children. Thirty-five per cent attend motion pictures weekly. The percentage rises to 70 per cent for the oldest age group. Six per cent go twice a week. Twenty-seven per cent of the children have mental maladjustments and generally do not get along with other children. Some tend to withdraw from work and play with others and refrain from confiding in their parents. They express themselves abnormally by stubbornness, laziness, and shyness. Their conduct at home is often radically different from that at school. It would seem a function of the physician to be the connecting link adjusting the mental hygiene of the entire day, planning a more logical stimulation of correct behavior during the 24 hour life of the child.

It is true that some of these items may appear trivial. We have ignored them in many instances, but the large percentage showing this behavior should alarm us and arouse us to participate in the guidance of our people. Medicine needs to practice this guidance actively for the entire population. Six thousand new physicians are licensed each year and only 2,900 are dying, hence if we are to escape over-crowding and perhaps price-cutting and other handicaps we must develop

fully the treatment of apparently well persons in the prevention of disease. We must utilize the good will of the parents to the advantage of the children by making every such referred case an opportunity for instruction in family hygiene, and the beginning of a regimen wherein the doctor aids in family management of health.

The State Department of Mental Hygiene³ recently described the added load of mental breakdowns by stating that there is need for a new 5,000 bed mental hospital in New York State every two years.

Study of the health consciousness of the high school and the college student today indicates remarkably abnormal health beliefs. These will only be corrected fully through additional attention by the physicians of the nation. A recent survey in Illinois showed only one-quarter (27 per cent) with an accurate health knowledge. Also, we must admit that this knowledge does not infer that the person will follow the proper practices. We must, therefore, help to stimulate these folks into action concerning health.

Summary

(1) School health service can assist in cordial understanding of the entire profession as to the underlying principles of school health activities.

(2) Harm from open disagreement with the school physician is preventable by not advertising differences with school diagnoses, in all contacts with the laity.

(3) Health behavior mistakes are found to be chronic and all children need a check up on minor errors at every opportunity.

(4) Team work of physician and school should be more common and can be excellently cordial if we have full understanding of the aims of the school health service.

STATE EDUCATION DEPARTMENT

References

1. American Child Health Association: *Physical Defects, the Pathway to Correction*, 1934.
2. O'Neill and McCormick: *Everyday Health Behavior*, N. Y. State Education Department, 1935.
3. *Mental Hygiene News*: N. Y. State Department of Mental Hygiene, September, 1934.

A CLINICAL AND PATHOLOGIC STUDY OF ALCOHOLISM

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Directly or indirectly an increasing number of deaths, illnesses, distresses, and economic waste are associated with the excessive use of alcoholic beverages. This is reflected especially in the fairly steady increase in new patients with alcoholic psychoses admitted to New York state hospitals and licensed institutions since 1920. In 1934 this admission rate was more than five times greater than it was in 1920.¹ The abrupt rise in the automobile accident rate since 1933 is closely related to the recent widespread availability of alcoholic beverages.

Although alcoholism has been an object of study in all parts of the world, and from the time of Noah to the present, the writers felt that the aforementioned conditions were no less deserving of study than any other disease or condition which has been found associated with a sharp rise in morbidity and mortality.

From a clinical standpoint alcoholism falls into two large classes: acute and chronic. The former of these is so well known as to require no description. Chronic alcoholism, aside from chronic intoxication, may be associated with a variety of clinical syndromes not entirely determined by alcohol *per se*, such as convulsions, hallucinatory experiences, persecutory delusions, and neuritis. It is not uncommon for the schizophrenic or the epileptic to use alcohol to excess.

Arctuanus,² in 1483, gave detailed descriptions of the psychic symptoms of alcoholism. Sutton,³ an Englishman, in 1813, and Ware,⁴ an American, in 1831, made excellent clinical studies of delirium tremens which had been called brain fever, delirium vigilans, mania à potu, in the preceding years. In 1822 James Jackson,⁵ of Boston, wrote a splendid description of neuritis "resulting from the use of ardent spirits" which he called arthrodynia à potu. In 1881 Wernicke⁶ described a form of encephalitis which came to be associated with alcoholism. Korsakoff,⁷ in 1887, first described in a typhoid patient the syndrome so closely associated with his name—polyneuritis,

confusion, memory defect, confabulation—a syndrome since commonly associated with alcoholism. Alcoholics that became demented were called paretics, more recently alcoholic pseudo-paresis, or alcoholic deterioration.

Considerable opportunity for the study of alcoholism was afforded by 20 patients admitted to the psychiatric wards of the Albany Hospital (Mosher Memorial) between January 1, 1929, and April 15, 1935, who came to necropsy. It is of interest that 12 deaths occurred since January 1, 1934. Needless to say, the condition of some of these on admission was such as to preclude obtaining as much information as was desired. These patients all fell into the category of chronic alcoholism with terminal exacerbations of the excesses in a few. All except 4 that became stuporous (Cases 2, 10, 18, and 20) showed fairly typical delirium tremens. Although 6 showed some degree of loss of deep reflexes, there were no definite Korsakoff types. Minor external ocular palsies in three (Cases 2, 6, and 19) seemed insufficient to regard them as Wernicke's syndromes.

Clinical Data

In this group of 20 there was one woman and one negro. Their ages averaged 45 years, with a range between 25 and 60. Twelve were native and 7 foreign born. The percentage of foreign born is higher than that of the state population or of the community from which they came. By occupation eight were laborers; other representations were clerk, waitress, porter, farmer, electrician, bartender, steamfitter, salesman, window washer, upholsterer, the occupation of three was not elicited. Eight were single, 4 separated, 4 married, 3 whole an adaptation was Irish, 5, Polish, 5, German, 3, English, 2, German-English, 1, German-Scotch, 1, Scotch, 1, Bohemian, 1, Austrian, 1. Twelve of the group were Roman Catholics, 8, Protestant, none were

From the Department of Neurology and Psychiatry and the Department of Pathology of the Albany Hospital. Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 14, 1935.

TABLE I

No.	Clinical Observations																	Remarks		
	Neurologic Observations										Laboratory Findings						Psychiatric Observ.			
	Age Sex Color		Oc. Palstes			Reflexes		Wass.		Urine		Sp. Fluid		Blood sugar	Over- activity	Stupor	Halluc.		Dis- orient.	
	Int.	Ext.	Arm	Knee	Ankl.	Bl.	Sp. fl.	Alb.	Sug.	Casts	Glob.	Cells								
1	60	M	W	?	—	+	+	—			Trace				+	±	A + V	+	Pneumonia.	
2	49	F	W	—	+	+	+	—	Trace		Trace			160.		+	—		Trace of bile in urine.	
3	56	M	W	—	—	+	+	—	Trace	+	Trace			33. 240.	±	+			Substern. aden, goiter, pneumonia.	
4	41	M	W	—	—	+	+	+	Trace	+	Trace		6	134.	+	+	A + V		Vandenbergh test posi- tive.	
5	42	M	W	—	—		+	—							+	+		+		
6	50	M	W	—	+		+		++				Blood		+	+	A + V	+	B. P. 205-110. Diac. and acet. in urine.	
7	25	M	W	—	—				Trace		Trace				+					
8	45	M	W	—	—	+	—	—	—	—	—	7		179. 117.6	—	+	A			
9	45	M	W	—	—		+	+	Trace		Trace				+		A + V	+	Pneumonia.	
10	36	M	W	—	—	+	+	—				5			—	+	—		B. P. 56-30.	
11	46	M	W	+	—	—	—	+	—	—	—	46		106.	+	+	A + V	+	No tyrosine in urine.	
12	39	M	W	—	—	+	—	—	—	—	—	6			+	+	A + V	+	Pneumonia.	
13	38	M	C	—	—	—	—	—							+	+	A + V	+		
14	46	M	W	—			+	—	++	+				194. 136.	+	+	V	+	B. P. 190-110.	
15	46	M	W	—	—	+	+	+	+	+		4		138.	+	+	A + V	+	Icta. ind. 9, 1 sugar tol. curve between nor. and diabetic curves.	
16	38	M	W	—	—	+	+	+	++	—			15	156	+	+	A + V	+	Toxic nephrosis.	
17	56	M	W	—	—	+	+	—	—	—	—	2			+	+	V	±		
18	58	M	W	+	—	+	+	—		—		4			—	+	—			
19	38	M	W	—	+	+	—	+	++	+	Trace				±	+	A + V	?	Lobar pneum. II.	
20	50	M	W	—		+	+	—	++	+		Blood		142.		+			Injury to head. Con- vulsions. B. P. 62-50.	

+ = Present or positive. — = Absent or negative. ± = Intermittency.

A = Auditory. V = Visual.

Jews. These facts on nationality and race correspond closely with the studies of Kirby,⁸ and Garvin,⁹ who pointed out that more alcoholics came from certain racial and national groups. Four were known to have alcoholism in the family. At least 3 had had alcoholic psychoses on one or more previous occasions. It is obvious that such data as were obtained on these subjects may not contain all of the truth. As regards education, without being able to obtain accurate data, it was felt that the group as a whole was below the average. Eight were by nature chiefly extroverts, 2 were known to be introverts, and data on the others could not be obtained. The quantity and nature of the liquor consumed could only be surmised from the statements of patients and friends. One had drunk whiskey regularly for 40 years, but more heavily than usual for 2 years. Gin, "cheap whiskey," "radiator alcohol," "dynamite," "derail" beer, applejack, brandy, "moonshine," "home brew," cognac, vodka, and rum were among the liquors consumed in sufficient quantity and over such a period of time as to make admission to a psychiatric hospital necessary, and with complications to eventuate in the death of the patients.

Additional clinical data regarding these patients is presented in Table I.

The following case history is presented because it is typical of delirium tremens uncomplicated by pneumonia. Although patients usually recover from delirium tremens unless there are complications, such as pneumonia or liver damage, this patient presented a fairly characteristic mode of death.

CASE 4. A farm laborer, aged 41, married, was admitted to the Albany Hospital in March, 1932, on account of insomnia, restlessness, irritability, and excessive use of alcohol. He was a solitary drinker and had, since the age of 17, drunk much hard cider. Several months before admission he was unemployed which gave rise to drinking more cider, "applejack," and brandy than usual. At Christmas, 1931, he suffered a bad cold with much aching in the arms and legs and occasional epistaxis. He became tremorous; his insomnia and irritability increased. Unpleasant dreams disturbed him and he was often confused at night.

All his life he had been a shy, shut-in, sensitive person, with an irritable temper, and much unpleasant reaction to misfortune. Hunting, next to drinking, afforded his chief

satisfaction. He had finished the first year of high school. His father had died at 76 with outspoken evidences of senility. His mother was living, but very worrisome. A brother and sister were living and well.

The physical examination revealed a pale, perspiring, tremorous man, with weak musculature. The deep reflexes were elicited with difficulty. The blood pressure was 122 mm. of mercury systolic and 84 diastolic. The liver was felt to be firm and regular, 2 inches below the costal margin. The blood and spinal fluid Wassermann were negative. The hemoglobin (Sahli) was 57 per cent and the white blood cell count was 9,800. The blood nonprotein nitrogen was 53 mgms. per cent. The spinal fluid pressure was 70 mm. and contained 6 cells per cu. mm.; globulin was present, but bile was not found although the specimen was tinged yellow. The Van den Bergh test was positive, with direct biphase reaction. The urine showed a trace of albumin and a few hyaline casts; it was not tested for leucin or tyrosin. The necropsy findings are in Tables II and III.

On admission the patient was oriented, but restless and anxious. There were no hallucinations and well-verified details of his life were recalled. Three days later he became very restless and noisy, was confused as to time and place, and feared harm from imaginary people whom he saw and heard about him. Periods of stupor alternated with noisy overactivity. He became cyanotic; the blood pressure dropped to 50/30 and continued to fall despite the use of whiskey and other stimulants; the pulse, which never exceeded 100, was barely palpable; his temperature rose to 103.5° (rectal), and he expired.

Psychopathologic Aspects of Alcoholism

It often happens that the end-stages of a process, such as alteration of tissues associated with death, occupy our major consideration while the subtle, intimate problems of life, bearing on the fatal issue, should engage more of our attention. Among the excuses for drinking given by these patients were lonesomeness, distress over too great sensitivity, consequences of sociability, worry over family troubles and finances, and unemployment. Hart¹⁰ has presented, in an interesting paper, a variety of reasons for excessive alcoholic indulgence.

It is not so unusual that the excessive use of alcohol should exist as a problem of life. People develop ennui over their existence and surroundings. Houses are

Gross Brain Findings			Microscopic Brain and Cord Findings															Remarks								
Sr. No. A. No.	Age at death	Brain Wt. Gms.	Arterio- sclerotic Ves.	Lepto- menin- ges	Bl. vessel changes				Cortical cells			Corpus str.			Floor 4th Y.				Mammil. Bod.			Cervical cord			Cerebellum	
					A	B	C	D	Loss	Deg.	Gl. repl.	A	B	C	A	B	C		A	B	C	A	B	C	A	B	C	Pkse loss	Deg.
#1 20-147	60				+	+																				Brain not obtained.
#2 30-49	49		+	—		+																		+	+	Brain atrophy — frontal.
#3 30-84	56																									Brain not obtained.
#4 32-41	41	1440	—	—	+	+																		+	+	Perivascular hemorrh. seen in gross.
#5 32-182	42	1250	+	—	+	+																		+	+	Rbc. in subar. space encephalomalacia.
#6 33-56	50	1570	+	—	+	+																		+	+	Rbc. in subarachnoid space.
#7 33-136	25	1580	—	—	—	—																		+	+	
#8 33-183	45	1150	+	Pet. Hem.	+	+																		+	+	Unilat. gliosis of cor. hem. post. col. of cord.
#9 34-4	45	1270	+	Cloudy	+	+																		+	+	Rbc. in subarachnoid space.
#10 34-5	36	1340	—	—	+	—																		+	+	
#11 34-14	46	1200	+	Pet. Hem.	+	+																		+	+	Corp. quad. negative.
#12 34-86	39	1370	—	Subara. Hem.	+	+																		+	+	Fat emboli in cortex.
#13 34-111	38		—	—	+	+																		+	+	
#14 34-159	46	1470	+	Subara. Hem.	+	+																		+	+	Patchy chr. lepto- meningitis.
#15 34-182	46		+	—	+	+																		+	+	Patchy chr. leptomen- ingitis focal glial pr.
#16 34-221	38	1200	+	Subara. Hem.	+	+																		+	+	Rbc. in subarachnoid space.
#17 35-51	56	1295	+	—	+	+																		+	+	Thrombosed vessel in pons.
#18 35-57	58		+	Focal Hems.	+	+																		+	+	Focal cerebral hems.
#19 35-116	38	1250	+	—	+	+																		+	+	
#20 35-117	50	1350	—	—	+	+																		+	+	Subarachnoid hem.

1. In grey matter commissure — hemorrhage. 2. Smallest arteries. 3. Gitter cells loaded with pigment. 4. No localized lesions in cornu ammonis and hipoc. gyri. 5. Corpus callosum negative.

A = Sclerosis of vessels. B = Perivascular softening. C = Capillary hemorrhage. D = Colloid. — = Absent. + = Present.

1. In grey matter commissure — hemorrhage. 2. Smallest arteries. 3. Gitter cells loaded with pigment. 4. No localized lesions in corpus ammonis and hippoc. gyri. 5. Corpus callosum negative.
 A = Sclerosis of vessels. B = Perivascular edema. C = Capillary hemorrhage. D = Conus. E = Absent.
 + = Present. — = Absent.

redecorated, new climes are sought, new friends made, new experiences craved to remedy staleness. Alcohol, a simple expedient, may give entree to a new personality more agreeable and more carefree than that of the usual self. Needless to say, more than one etiologic factor may be present to undermine the integrity of the alcoholic patient, whose concern for himself is usually less than that of his relatives and associates.

Whether liquor itself, without some unusual psychobiologic attribute in an individual, has much capacity to form habits is an open question.

In their experience, the writers have encountered the following psychopathologic bases for alcoholism. Rarely, persons drink because they like the flavor of liquor; in fact, the usual alcoholic dislikes the taste of liquor but may seek the mouth stimulation that it gives. Symptoms, such as depression, anxiety, and even hallucinations, have been relieved temporarily by the excessive use of alcohol. We have seen drink used as an attenuated form of suicide. The unendurable lonesomeness which at times follows sociable drinking becomes a new reason for further indulgence. Some persons dread the very unpleasant feelings occasioned by the after-effects of a few drinks, and to relieve this dread, continue to drink. Some drink for sex stimulation. Homosexuals and others, too, have used alcohol to remove the conventional restraint that prevented sexual acts. Bartenders may, but do not as a rule, develop alcoholism as a sort of occupational disease. We have seen persons drink to boost declining energies or dispel fatigue. Drinking as a retaliation to, or relief from, unpleasant domination is not uncommon. Only when under the influence of alcohol are some men able to assert themselves as they expect men to do.

One must bear in mind the poor, resourceless, and ignorant—also the well-to-do, resourceless and ignorant—who resort to the simplest expedient for deriving a change of state.

The following case history presents only one of many psychopathologic bases for excessive use of alcohol. Little or no evidence of a psychosis was present other than that found in her simple life-history.

CASE 2. A widow, aged 49, a waitress,

was admitted to the Albany Hospital on April 7, 1930, in a stupor. Accordingly, her history was difficult to obtain at the time. Her physical examination revealed bilateral ptosis of the eyelids; nonpalpable liver; reflexes, equal and present. The urine showed a trace of albumin, sugar, and bile. The Wassermann reaction of the blood and spinal fluid was negative.

A few hours after admission she seemed clear and gave an account of her life. There were alcoholics on the maternal side of her family. She had been happily married, but her husband had been killed in the World War. Since then it had been necessary for her to work as a waitress. In order to relieve her chronic sorrow, depression and lonesomeness she drank gin and beer in large quantities. She could find little satisfaction in the companionship of others. After a lucid interval of two or three hours she again became stuporous; the lungs filled with fluid; the temperature rose to 103.8° (rectal); she became cyanotic, and died two days after admission—perhaps an attenuated form of suicide.

Neuropathologic Aspects of Alcoholism

Wernicke,⁹ in 1881, reported the brain findings of three alcoholic patients, two men and one woman, aged 33, 36, and 20, respectively. The patients were admitted to the hospital in March, June, and December, and showed ocular palsies, ataxic gait, optic neuritis, and delirium, and, except for one, ran a rapidly fatal course. He found hemorrhages and inflammation about the third ventricle, central gray, and aqueduct in the region of the superior colliculi. He cited the report of Gayet¹¹ who described a similar case in 1875 called "affection encéphalique," characterized by "capillary apoplexy" in the region of the third and fourth ventricle. Wernicke gave to the condition the name, "polioencephalitis hemorrhagica superior."

In 1897, Bonhoeffer¹² reported acute and chronic changes in Betz and Purkinje cells, and the breaking down of radiating fibers in the brains of patients dying of alcoholic delirium. Trömmner,¹³ in 1899, described the neuropathology of delirium tremens to be acute and chronic brain cell changes, more especially in the anterior half of the cerebrum with mild changes of various kinds in other structures of the central nervous system. In 1901, Meyer¹⁴ described degenerative changes in the cortical cells of patients

dying of debilitating and certain alcoholic states. He gave the name, central neuritis, to the condition. Mott,¹⁵ in 1910, pointed out the reduction in radiating fibers in chronic alcoholism, described the central neuritis, and emphasized the presence of fatty degeneration of the media of the arteries and small vessels of the brain. Marchiafava¹⁶ has called attention to degeneration in the corpus callosum in chronic alcoholics.

Oppenheim¹⁷ found Wernicke's syndrome associated with a case of influenza, not surprising in view of midbrain pathology associated with the recent influenza and encephalitis epidemic. Neuberger¹⁸ also found Wernicke's syndrome in non-alcoholics. It has been frequently demonstrated that the brains of chronic alcoholics do not all present polioencephalitis hemorrhagica superior. Not all have agreed that the hemorrhagic lesions are associated with inflammation, (Shroeder,¹⁹ Walthard,²⁰ Ohkuma²¹). Gamper²² associated the Korsakoff syndrome with it more closely than any other and found changes chiefly in the brain stem.

Creutzfeldt²³ has reported cortical atrophy and degenerative changes in the basal ganglia of alcoholics. Tsiminakis²⁴ noted degenerative changes in the bulbar and pontine nuclei, and in the thalamus in the brains of Korsakoff victims. Neuberger¹⁸ found areas of softening in the central gray and mammillary bodies in particular, but also at times in the inferior olivary bodies, substantia nigra, corpus striatum, and cortex. Warner²⁵ has recently reported 7 cases in which he could not harmonize clinical types and pathology. His findings are similar to those of other investigators. Bender and Schilder²⁶ have attempted a finer correlation of the Wernicke syndrome with clinical variations and pointed out that the pathology tended to be confined to regions adjacent to spinal fluid reservoirs. Marchand and Courtois²⁷ found encephalomyelitis of varying degree in acute Korsakoff victims, exclusively women. Bender²⁸ made an excellent study of the myelopathies found in association with the Wernicke syndrome.

It is apparent that chronic alcoholism belongs to a wide group of intoxications, in which there are great variations in the toxic agent, the conditions of its use, the state of the user, and the vulnerability of

the individual. Certain somatic structures may suffer more from the abuse of alcohol than others. It should follow, as reports from the literature indicate, that the neuropathology of chronic alcoholism would vary widely.

The problem is complicated by the fact that chronic alcoholics may have gastritis, achlorhydria, and anorexia, and therefore may suffer dietary deficiency diseases such as neuritis with vitamin B deficiency, or even pellagra, according to Klauder and Winkelman.²⁹ The products of liver and other organ damage may have a deleterious effect on the nervous system. (Weil³⁰) Toxic substances, such as tri-orthocresyl phosphate³¹ and impurities in the alcoholic beverage, may be responsible in certain cases for neuropathologic lesions.

Pathologic Findings

The material used consisted of sections stained with hemotoxlyn and eosin. Fat stains were also made. The tissue was fixed in either formalin or Zenker's solution. Preliminary control studies were made on the liver and kidney in the cases of 8 non-alcoholics dying of acute illness or accident, belonging to the same age groups and with the interval between death and necropsy corresponding to the intervals in the alcoholic group. Relevant data of the controls is presented in the accompanying table on next page.

These controls gave valuable information about post-mortem changes and it is of interest that in none was there demonstrable liver damage. Apparently fat metamorphosis is not a concomitant of pneumonia.

Central Nervous System

In 18 out of the 20 cases of alcoholism studied the brain was removed. In every case the brain at autopsy was described as showing congestion of the vessels and general increase of fluid in the subarachnoid space—the typical “wet brain” of alcoholism. In 12 there was definite gross arteriosclerosis of the basal blood vessels and of the circle of Willis. If the cases with latent syphilis (Nos. 11, 17, and 18) are excluded, it is unusual in our experience to find such marked arteriosclerosis in a group of cases 50 years of age or under. Senility may be ruled out as a cause of the vascular changes found. Sub-

arachnoid hemorrhages occurred in 6 and frontal atrophy in 2, both under 50 years of age, and both with negative Wassermann reactions. In the case of No 5, a man 42 years of age, the brain showed encephalomalacia involving the left frontal region, the putamen, and the left lenticular nucleus. In none of the cases were there gross hemorrhage into the brain substance. Two had slight internal hydrocephalus, unilateral in one, bilateral in the other. There were no gross lesions in the brain stem or cerebellum.

Study of the microscopic sections of the brains compels attention to one common factor which stands out prominently. In each, the medium and small-sized arteries in the brain and leptomeninges appear distinctly as hyalin rings of thickened media in the cortex, the corpus striatum, the thalamus, the lenticular and caudate nuclei, in the subependymal regions bordering the ventricles, in the pons, and in the medulla. The veins and capillaries are engorged and injected and, in 8 cases, small capillary hemorrhages occur about the blood vessels. (See Fig 2.) In addition, there are sieve like areas of perivascular rarefaction scattered through the brain. These are present, not only in the cortex, but in the basal ganglia, the central white substance, and the pons. Less prominent than the vascular changes, but constantly present, is the patchy loss of ganglion cells. This is most marked in the third and fourth cortical layers. Here individual nerve cells have disappeared and there is a glial reaction in the form of a satellite gliosis with neuronophagia and a replacement of lost nerve cells by "glia-rasen" consisting of from 10 to 25 glia nuclei. The nerve cell loss is so scattered in character that the glial response always remains moderate in degree. Special studies of the hippocampal gyrus in 4 cases show no localiza-

tion of the lesions. These cortical changes are presented in a diagrammatic sketch (See Fig 1.) One section from the corpus callosum is negative. In 9 cases, sections from the corpus striatum show no selective action, arteriosclerosis being present, with occasional small perivascular hemorrhages and rarefactions. In 9, the thalamus, the lenticular and the caudate nuclei show the same diffuse vascular lesions. Studies of the subependymal glia bordering the lateral ventricles, adjacent to the aqueduct of Sylvius, and in the floor of the fourth ventricle, show the same arteriosclerosis, but hemorrhages and rarefactions are less constant than in the cortex. In 6 cases sections of the mammillary bodies were made, but aside from the vascular lesions already described, there is no characteristic pathology except a small focal area of gliosis in one.

The brain stem of Case 17 shows petechial hemorrhages into the nuclei and a thrombosed vessel in the pons. This is the only case in the series with a lesion even slightly suggestive of Wernicke's polyencephalitis hemorrhagica superior. The medullae show no lesions aside from the vascular changes similar to those in the cortex. Sections of the cervical cord from 10 are negative except for one which shows a small hemorrhage into the gray commissure. In all of the 18 cases examined, the changes in the cerebellum consist of acute swelling and loss of the cells of Purkinje. Whether this constant finding should in any way relate to the ataxia of alcoholism is an interesting question. Gross and microscopic brain findings are presented in Table II.

In this small group of cases no definitely characteristic cerebral lesions caused by alcoholism were found and no special areas in the brain were affected by selective action. The same picture is found in other toxic states such as lead poison-

CONTROLS

Autopsy number	Age	Post mortem hours after death	Cause of death	Kidney	Liver
A-33244	45	0 Hrs 25 Min	Peritonitis	Negative	Negative
A-33232	43	3 "	Pneumonia	"	"
A-33224	49	14 "	"	"	"
A-33217	54	28 " 30 "	"	Chronic Nephritis	"
A-33168	51	1 Hr	Drowning	Nephrosclerosis	"
A-3359	49	45 "	Peritonitis	Negative	"
A-3351	52	13 Hrs	Pneumonia	Passive Congestion	Passive Congestion
A-3330	49	15 "	3rd Degree Burns	Negative	Negative

ing and pernicious anemia. The outstanding pathology in the central nervous system in these cases is a diffuse vascular lesion consisting of: (1) An arteriosclerosis of the medium- and small-sized vessels medial in character, out of all propor-

tion to the age group in which 80 per cent of the cases fall; (2) an injection of the capillaries, and venous engorgement with very slight perivascular extravasations of red blood cells; (3) a cerebral edema of sufficient duration to be char-

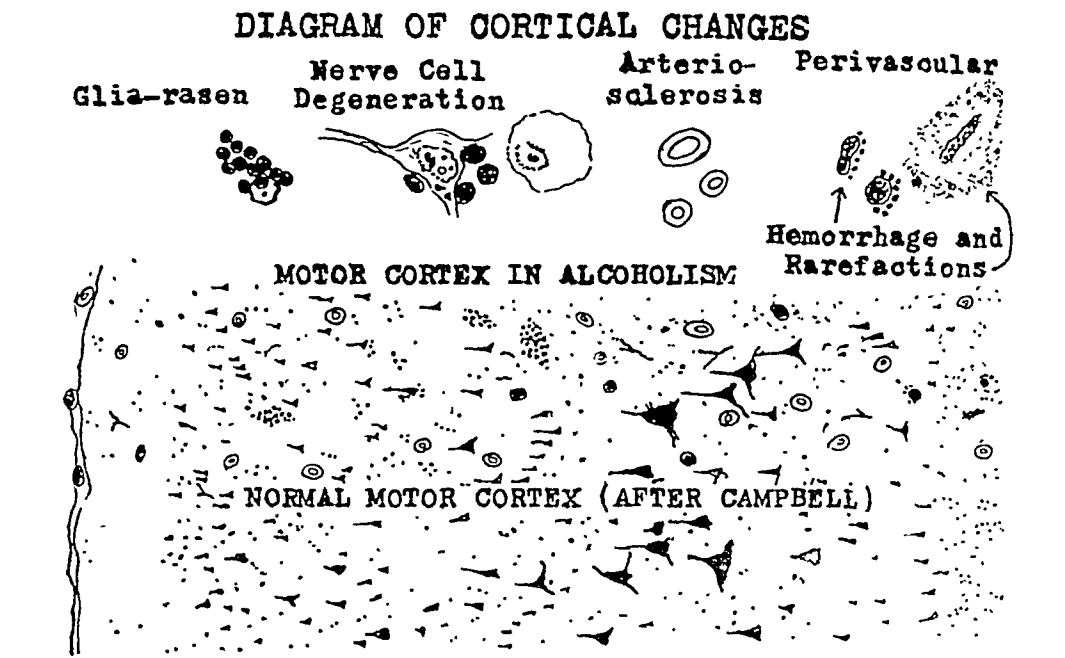


Fig. 1. Diagrammatic representations of cortical changes in alcoholism compared with the normal cortical architecture.

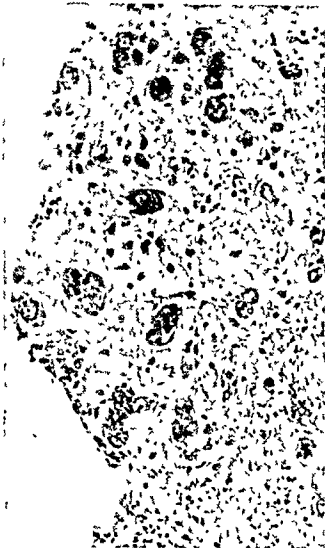


FIG. 2.



FIG. 3.



FIG. 4.

Fig. 2. (Case 6, A3356) Subependymal area bordering the lateral ventricle showing arteriosclerosis and venous congestion. 45 cm. distance, 16 mm. obj. 8 x occ.

Fig. 3. (Case 16, A34221) Kidney showing slight passive congestion. The picture is characteristic of 80 per cent of the cases. 40 cm. dis-

tance, 32 mm. obj. 8 x occ.

Fig. 4. (Case 15, A34182) Mild to moderate fatty metamorphosis of the liver. Liver locules well preserved; small fat droplets within the cells about the hepatic vein. Very slight fatty infiltration in midlocular portion. (Magnification same as Fig. 2.)

acterized by sieve-like areas of perivascular rarefaction. The nerve cell loss is felt to be secondary to the blood vessel changes.

Kidney

The elimination of alcohol through the kidneys might lead one to suspect that the brunt of the pathologic condition would occur in these organs. It is surprising to note that the kidney lesions prove to be minimal-passive congestion being present in 80 per cent of the cases, cloudy swelling in 70 per cent, and slight glomerular changes in 20 per cent. In 3 there are no kidney lesions demonstrable. (See Fig. 3.) Gross and microscopic kidney findings are presented in Table III.

Liver

No attempt has been made to compile a bibliography of the changes produced in the liver in toxic conditions such as alcoholism. The literature is voluminous, the controversial points are numerous, and include questions concerning the localization of function of the liver; the meaning of fat metamorphosis in liver cells; what constitutes irreparable cell damage; whether the intracellular fat droplets represent true liver cell degeneration in contra-distinction to the large fat droplets which may be stored fat; and all the problems concerning the distinction between definite types of cirrhosis. The liver is an area about which there is much to learn and all that is attempted is to state the findings, bearing constantly in mind the classic fundamentals laid down by Mallory²² for early stages of cirrhosis, both of the toxic and of the so-called alcoholic types. In the study of these 20 cases it is found that the lesions of the liver are much more severe than the cerebral changes. They consist of fatty metamorphosis of the liver which vary from the mildest types that show early collections of small fat granules in the cells about the hepatic vein and preservation of the locular structure (Fig. 4), through the more severe stages where, in addition to the cellular degeneration about the central vein, there are extensive deposits of large fat granules in the mid- and peripheral portions of the locule (Fig. 5), to the severest types where there is central necrosis, loss of the normal locular structure, and a diffuse fatty meta-

morphosis. (See Figs. 6 and 7.) In only 1 case (No. 18) is there present the characteristic hyalin or hydropic degeneration of liver cells accepted as a criterion constantly found in alcoholic cirrhosis.²³ In this case there is a slight increase, both relative and absolute, in the connective tissue about the islands of Glisson, and a very slight cellular infiltration. Unfortunately, as in many of the reported cases of early so-called alcoholic cirrhosis, the picture is complicated by a latent syphilis which, in itself, produces liver damage. It is questionable whether this change could be considered due entirely to alcohol. There are no polymorphonuclear infiltrations, no regenerating liver cells, no proliferation of the bile ducts, no connective tissue increase, in any of the other cases. The liver changes are primarily of the type of a central necrosis with the periportal cells suffering the least damage. The change is essentially a toxic alteration and the fat deposits may be in the nature of a protective reaction.

In this group of cases, many had used alcohol to excess over long periods of time, yet in 19 of the 20 there is no evidence of even early cirrhosis. Conclusions can not be drawn from such a small number, but it is felt that these findings point again to the fact that alcoholism, *per se*, is only one factor in the production of the so-called alcoholic cirrhosis.

No characteristic correlation between liver and brain changes can be made. In both organs the processes are diffuse with no selective affinity for sites of predilection. However, it may be that certain embryonal structures are affected more than others in alcoholism. The brain changes are primarily vascular or mesodermal in type, nerve cell and glial changes being secondary to these. The liver changes are endomesodermal. This view is supported by the fact that in 40 per cent of the cases in this group there is associated pathology of the spleen, pancreas, or the gastrointestinal tract. (Spleen, 25 per cent; pancreas, 15 per cent; gastrointestinal tract, 15 per cent.)

The kidney, liver, and other necropsy findings are presented in Table III.

Treatment

Alcoholism, in reality, a mere symptom of a larger life disturbance deserving of study, is preventable. Some European

Sr. No. A. No.	Kidney				Liver				Pathology			Other pathological findings	Cause of death	P.M. after death hrs.				
	Wt. Gms.		Pass. cong.	Cl. swell tubular	Glom. deg.	Wt. in gms.	Pass. cong.	Fatty		Cent. deg.	Infil.				Cent. nec. or atroph.	Brain cortex	Kid- ney	Liver
	Rt.	Lt.						Cent. deg.	Infil.									
#1 29-147	160	180	+	+	—	1850	+	+	+	+	+	+	*	†	Healed pul. TB. calcified. Chr. prostatitis with hypertrophy.	Bronchopneumonia.	2.5	
#2 30-49	120	120	+	+	—	1300	+	+	+	+	+	+	*	†	Hypoplasia rt. ant. cerebral artery.	Bronchopneumonia.	2.0	
#3 30-84	150	130	—	—	—	1700	+	+	+	+	+	+	—	†	Chr. pancreatitis, anemic infarct spleen, subst. cal. aden. thyroid. artsc.	Bronchopneumonia. purulent bronchitis.	22.0	
#4 32-41	200	190	+	+	+	2220	—	+	+	+	+	+	†	†	Subacute toxic nephritis.	Circulatory failure.	1.5	
#5 32-182	140	150	—	—	—	1500	+	Sl.	†	+	+	+	—	†	Subacute myocarditis, acute splenitis.	Bronchopneumonia.	2.0	
#6 33-56	140	190	—	+	—	2180	+	+	+	+	+	+	*	†	Partial atelectasis.	Pulmonary edema.	12.5	
#7 33-136	225	275	+	+	—	2925	—	+	+	+	+	+	*	†	Pet. Hems. gastric, duod. mucosa pul. congestion, acute splenitis.	Alcoholism.	12.0	
#8 33-183	170	180	—	—	—	2000	+	+	+	+	+	—	*	*	Arterio-nephrosclerosis.	Acute bronchopneum.	11.0	
#9 34-4	125	140	+	+	+	1670	—	+	+	+	+	+	*	†	Pul. congestion.	Cardiac dilatation.	1.5	
#10 34-5	150	170	+	—	+	1700	—	+	+	+	+	+	*	†	Acute hem. pancreatitis.	Alcoholism.	2.0	
#11 34-14	220	210	+	+	+	2000	+	+	+	+	+	+	†	*	Pul. edema, luetic enceph. mening. aortitis, pul. TB., periarthritis nod. otitis media, pityriasis rosea.	Bronchopneumonia.	4.0	
#12 34-86	155	190	+	+	—	2010	+	+	+	+	+	+	*	†	Chr. cystitis.	Cerebral fat embolism.	1.5	
#13 34-111	190	215	+	—	—	2300	+	+	+	+	+	+	—	†	Hem. into temporal muscles and parotid glands (traumatic).	Acute bronchopneum.	2.0	
#14 34-159	165	175	+	+	+	1890	+	+	+	+	+	+	*	†	Coron. sclerosis, slight myocar. degen., mucocele appendix.	Hypostatic pneumon.	7.0	
#15 34-182	145	135	+	+	—	1610	+	+	+	+	+	+	*	†	Healed pleuritis with adhesions.	Bronchopneumonia.	14.5	
#16 34-221	155	180	+	—	—	1785	+	+	+	+	+	+	—	†	Chr. leptomeningitis, abscess rt. supraorbital region (tr.).	Bronchopneumonia.	1.75	
#17 35-51	150	205	+	+	—	1920	+	+	+	+	+	+	*	*	Acute degen. myocardium mult. pul. thrombi.	Acute bronchopneum.	12.0	
#18 35-57	150	170	+	+	+	2040	+	+	+	+	+	+	—	†	Chr. myocarditis, chr. perisplenitis, acute pancreat. lues.	Alcoholism.	13.5	
#19 35-116	220	240	+	+	—	3150	+	+	+	+	+	+	*	†	Ac. pleuritis, tracheo-bronchitis splenitis, lat. syphilis, hid. frac.	Lobar pneumonia.	8.0	

governments have materially reduced the incidence of alcoholism by placing forcibly before their people the facts relating to its morbidity and mortality. Resourceless people, who habitually resort to chemical means of getting away from themselves, should be a challenge to parents, educators, and recreational leaders. The physician is usually the last line of defense. The opportunity to study the organs of chronic alcoholics suggests certain measures that may, in an emergency, throw the balance in favor of life.

(1) Give foods containing all of the vitamins in any way they can be given.³⁴

(2) Dehydrate moderately. Restrict fluids. Use saline purges moderately. Give 300 c.c. of 25 per cent glucose intravenously once or twice daily to reduce cerebral edema and support a damaged liver.

(3) Keep the patient quiet (away from stimulation), because of the precarious condition of blood vessels that may rupture and bleed. Opium or pantopon may be used. Paraldehyde and chloral are not indicated.

(4) A rapidly falling blood pressure has been found to be serious. Vasoconstrictor drugs and measures are indicated. Fluid extract of ergot has been used.

(5) The use of spiritus frumenti after the onset of delirium tremens has not proved particularly beneficial in our hands.

Summary

(1) The recent increase in morbidity and mortality traceable to alcoholism has seemed sufficient reason for renewed study of an old problem.

(2) Some historic aspects of alcoholism, including the Korsakoff psychosis, are given. Delirium tremens was formerly called brain fever and delirium vigilans. Alcoholic neuritis was known as *acrodynia à potu*.

(3) Clinical data concerning 20 alcoholic patients who came to necropsy are presented. This includes facts relative to age, sex, race, religion, education, occupation, nature of liquor used, neurologic, laboratory, and psychiatric observations.

(4) A typical history is reported giving the clinical course and mode of death. Although pneumonia is a frequent complication, this patient died with rapidly falling blood pressure.

(5) Psychopathologic aspects of alcoholism are reviewed and exemplified by a short case history. One of many psychopathologic bases for its excessive use is to change the undesirable state of an otherwise resourceless person.

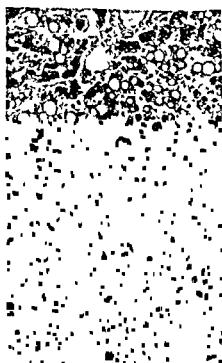


FIG. 5.

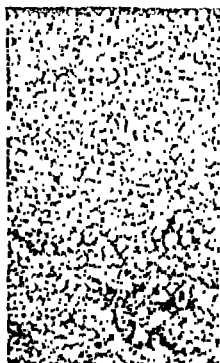


FIG. 6.

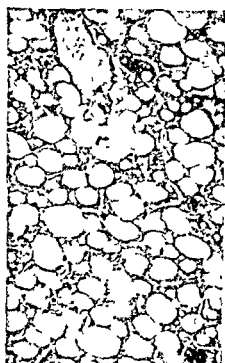


FIG. 7.

Fig. 5. (Case 13, A34111) Moderate fatty metamorphosis of the liver. Liver locules still distinct. More intense fatty degeneration in the central portion, and fatty infiltration involving both the midlocular and peripheral portion. (Magnification same as Fig. 2.)

Fig. 6. (Case 10, A345) Moderate to severe fatty metamorphosis of the liver. Loss of locu-

lar structure. Liver cell necrosis. Diffuse fatty infiltration (Magnification same as Fig. 2.)

Fig. 7. (Case 12, A3486) Severe fatty metamorphosis of the liver. Complete loss of locular structure. Loss of liver cells. Coalescence of fat making large fat droplets throughout the entire liver. (Magnification same as Fig. 2.)

(6) Some historic facts about the neuropathology of alcoholism are given, including Wernicke's polioencephalitis hemorrhagica superior.

(7) The pathologic findings in the central nervous system, kidney, and liver are presented and discussed. The brains show arteriosclerosis of the small arteries, cerebral edema, and congestion with secondary nerve cell injury, and gliosis. The cells of Purkinje are constantly affected. Lesions in the kidneys are very slight.

The most pronounced pathology is found in the liver. It shows fatty metamorphosis. The spleen, pancreas, and gastrointestinal tract are frequently damaged.

(8) Based on the pathology of alcoholism found, the treatment suggested includes high vitamin diet, dehydration to combat cerebral edema, hypertonic glucose to protect brain and liver, and enforced rest to conserve the injured vascular system.

ALBANY HOSPITAL

References

1. New York State Department of Mental Hygiene Annual Report, 1933, and personal communication from Dr. Horatio Pollock.
2. Garrison, F. H.: *History of Medicine*. Third Edition, p. 149.
3. Sutton, T.: *Talks on Delirium Tremens*, etc. London, 1813.
4. Ware, J.: *Mass. Med. Soc. Comm.* 5: 136: 1831.
5. Jackson, J.: *N. E. Jr. of Med. and Surg.* 11: 351: 1822.
6. Wernicke, C.: *Gehirnkrankheiten*. II. Band. 1881.
7. Korsakoff, S. S.: *Westnik Psichiatrii*, IV. 1887.
8. Kirby, G. H.: *Jr. A. M. A.* 57: 9: 1911.
9. Garvin, W. C.: *Am. Jr. of Psychiatry* 9: 739: 1930.
10. Hart, H. H.: *Arch. Neur. and Psych.* 24: 116: 1930.
11. Gayet.: *Arch. de. Phys.*, Paris, 1875.
12. Bonhoeffer, K.: *Mon. f. psy. neur.* 1: 229: 1897.
13. Trömmner, E.: *Arch. f. psy. u. nervenk.* 31: 700: 1899.
14. Meyer, A.: *Brain*, 24: 47: 1901.
15. Mott, F. W.: *Brit. M. Jr.* 2: 1403: 1910.
16. Marchiafava, E.: *Lancet*, May 27, 1933.
17. Oppenheim, H.: *Lehrbuch der Nerven Krankheiten*. 1923.
18. Neuberger, K.: *Zeitschr. f. d. gesam. Neurol. u. Psychiat.* 135: 159: 1931.
19. Schroeder: Quoted in Bumke: *Handbuch der Geistes Krankheiten* 11: 1930.
20. Walthard and Luethy: *Zeitschr. f. d. ges. Neurol. u. Psychiat.* 116: 404: 1928.
21. Ohkuma, T.: *Zeitschr. f. d. ges. Neurol. u. Psychiat.* 126: 94: 1930.
22. Gamber, E.: *Deutsche Zeitschr. f. Nervenhe.* 102: 122: 1928.
23. Creutzfeld: *Zbl. Neur.* 50: 1928.
24. Tsiminakis, Y.: *Arb. a. d. Neurol. Inst. a. d. Wien Univ. Bd.* 33: 1931.
25. Warner, F. J.: *Jr. Nerv. and Men. Dis.* 80: 629: 1934.
26. Bender, L., and Schilder, P.: *Arch. Neurol. and Psychiat.* 29: 990: 1933.
27. Marchand, L., and Courtois, A.: *Rev. Neurolog.* 41: 2: 425. 1934.
28. Bender, L.: *Arch. Neurol. and Psychiat.* 31: 310: 1934.
29. Klauder, J. V., and Winkelman, N. W.: *Jr. A.M.A.* 90: 364 (Feb. 4). 1928.
30. Weil, A., and Crandall, L. A.: *Tr. Am. Neurol. Assn.* 1932.
31. Smith, M. I., and Lillie, R. D.: *Arch. Neur. and Psychiat.* 26: 976: 1931.
32. Mallory, F. B.: *Bull. Johns Hopkins Hospital*, 22: 69: 1911.
33. Hall, Ernest M., and Ophüls, W.: *Am. Jour. Path.* 1: 477: 1925.
34. Minot, G. R., Strauss, M. B., and Cobb, S.: *N. Eng. Jr. Med.* 208: 1244: 1933.

Discussion

DR. LASALLE ARCHAMBAULT, Albany: I desire to congratulate Dr. Ziegler and Dr. Horner. This is not only a most instructive paper, but likewise a scholarly presentation. It is most universally agreed at the present time that the changes occurring in the brain in chronic alcoholism are not due to alcohol *per se*, but to various rather poorly understood metabolic disturbances resulting from the impaired gastrointestinal function, anorexia, inadequate assimilation of food, and the consequent nutritional deficiency. Nevertheless, this does not alter the fact that the excessive indulgence in alcohol is actually the responsible factor.

I was glad to hear Dr. Ziegler say that Korsakoff's syndrome occurs in other conditions than alcohol. If I understood him correctly, Korsakoff's first case was one of

typhus fever. Personally, I have encountered this syndrome in connection with typhoid fever, the polyneuritis of pregnancy, and in carbon monoxide poisoning.

As regards treatment, if Dr. Ziegler has not been fortunate in his cases with the use of spiritus frumenti, others have had much better luck and several reports have recently appeared in the literature in which patients were allowed to continue their usual ingestion of liquor, but at the same time were kept on a proper diet making ample provision for vitamins, yeast, liver extract, and other things. These patients fared remarkably well. This is in keeping with my own training received years ago, viz., that the physician should treat a sick man the way he treats himself when he is well.

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EDITORIALS

Preserve the Worthwhile

A year has passed since President Roosevelt's Committee on Economic Security decided that if health insurance was to be part of the social security program knowledge of how it would work in the United States should first be obtained.

In the interim, a special medical advisory board has been appointed, extra time extensions have been asked for and have been granted, much effort has been expended by well known researchers in health insurance, and for all that the public and the medical profession knows, the central cabinet committee is still either uninformed or it is not yet in position to publish the information that it has accumulated.

There are those¹ who report that close observers of the Washington scene hold to the opinion that there will be no further action, and there are others who contend that health insurance will be studied again in all its phases once the new social security board is formed and operating.

The situation from the standpoint of organized medicine, is important. The organized profession has not recalled or regressed on any one of its considered objections to the advocated schemes which would impose a burdensome bureaucracy

upon the profession, inhibit its initiative, deprive it of the natural rewards which come to it from industry and application combined with service to the public.

The profession is not unaware of the larger implications which regimentation, loss of freedom and additional tax burdens have on the population generally, and on the profession particularly.

Dr. Nicholas Murray Butler,² the President of Columbia University, made a notable contribution to the sober thinking of our people in his considered critique of the general New Deal policies, when he warned against fundamental changes on the American political stage,— changes in the form of our Government,— which will eventually come about by regimentation of industry and agriculture through taxation. It has been our viewpoint for some time that the onset of socialization of medicine in this country which would destroy the high standard of medical services which our people now receive, would mark the beginning of such fundamental changes in our Government that its end result can hardly be foreseen, and these changes we too see as the result of regimentation of the laboring groups and the profession through taxa-

² Dr. Nicholas Murray Butler, Annual Address at the Parrish Art Museum. Reported in the *New York Herald Tribune*, Monday Sept. 2, 1935.

¹ *Medical Economics* August 1935, page 54

tion. In the examples cited by President Butler, and in the case of the medical profession, the large class of bureaucrats which will come into being as part of these schemes will be the second factor which will undermine our form of government.

A slight detachment of stone and debris from the mountain side has been known to start an avalanche whose catastrophic end results were seemingly disproportionate to the initial small displacement. If the tyrannies of Russia and Germany ever pass, the student of trends in political affairs will do well not to overlook the first step in the effacement of popular liberty. In this country, when they begin to cheapen labor by giving the industrialist a cheaper laborer because the government subsidizes medical services, and when they narcotize organized labor by handing it cheaper medical services in lieu of wages, and when they regiment and saddle the medical profession with lay control and administration, then the process is started which habituates the public to the loss of liberty and initiative. All are sold,—the employer, the employee, the medical profession,—and the public! And all is done in the name of social security!

The decline of a democracy is so gradual and so insidious, the people are drugged with such thought-befuddling formulae, all of which is apparently for their particular well being, that an autocrat is saddled and astride the land long before the people generally realize it.

It is a commentary on how far we in this country have already moved into a changed conception of the legislative function of our Government, when instead of concerning ourselves with what Congress is thinking of proposed legislation, we are so greatly concerned with the attitude of the executive branch of Government. We are prompted to make this observation because of the space that one of the very popular magazines gives to a spokesman who speaks for the attitude of the President's mind. We too are now interested from that standpoint. We cannot help it.

Scanning the political horizon, we may take the recently published article by George Creel³ as sincerely representative of the presidential mind and purpose. Creel reports the President as "refusing to dodge realities", and, on the other hand, as being "unafraid of charges of inconsistency".

It is our hope that Creel is correct in estimating the mind of the President. We would indeed welcome his lack of fear of being charged with inconsistency, when and if he should take this question out of all hands except that of the medical profession. Put the question of evolving a system of adequate medical care at a cost within the reach of our people squarely up to the medical profession to work out. This profession has heretofore never evaded an obligation for service. Eventually, there will be evolved a system of service that will preserve all that is worthwhile in the present methods, and it will develop the new in that *spirit of cooperation* which is the keynote of the new era. Nor need the orderly process of evolution be hurried. From no source in our country comes any report of neglected medical cases nor unfulfilled demands for medical care. On the contrary, mortality and morbidity reports from all sections are unusually good.

No Truce

In spite of the fact that funds have not been provided for the social security program just voted and there has been no opportunity to observe its workings or calculate its costs, many observers are confidently predicting that Congress will enact sweeping health insurance legislation at its next session. The personnel of the committee studying this question for the President lends weight to such prophecies. It follows that the profession must redouble its efforts in the next few months to rally legislative and public opinion against a system which has nowhere pro-

³ George Creel, Looking Ahead with Roosevelt. *Collier's Weekly*, Sept. 7, 1935.

duced standards of medical care equal to those in the United States

The few months which remain before national and state legislatures reconvene cannot be considered a truce. This is a time when law-makers are at home and available to their constituents, and physicians should make it a point to establish contacts with their representatives.

Few legislators have had either the occasion or the opportunity to study the actual operation of compulsory health insurance in Europe. They do not know that where it is considered an advance it followed such a low grade of contract practice that almost anything would have been an improvement. On both the preventive and the curative side the United States, with private practice, gives its working classes medical care of a standard not even approximated in countries with obligatory pre payment.

The costs of compulsory health insurance are another factor which the great majority of legislators have never investigated independently. Without studying the actual figures, they accept the statement of the Kingsburys and the Falks that the expense would be no greater than at present. Even advocates of obligatory pre payment postulate thirty-six dollars per person as the annual cost of an adequate insurance service,—considerably more than is spent today. In practice, there is a constant increase in administrative expenditures under compulsory health insurance, with the result that a considerable proportion of the monies available go to support the top heavy bureaucracy that inevitably accompanies this system.

This country receives superior medical service because it gives its physicians free play and full responsibility. Obligatory pre payment destroys the essential independence of healing, shackling the practitioner with tedious clerical duties, limiting the right to prescribe and destroying the incentives to individual research. Those who attempt to reduce medical practice to bare statistics overlook these essential elements.

It is not enough to point out these facts to legislators and politicians. Patients, influential laymen, should be made to realize what compulsory health insurance would mean to them in increased taxation and lower standards of medical care. This is an opportune time to arouse public and political opinion to the folly of launching the nation upon another expensive program of social insurance before the first has found its bearings.

The Immortal Ram

"I represent the immortal ram caught in the thicket—a life given as ransom for many". In these words Dr. William Howard Jones, a distinguished English anaesthetist, described the financial stress which drove him to suicide. A vast amount of unpaid hospital service left him no reserves with which to meet a drop in private practice. When he could not make both ends meet, death seemed the only way out.

Commenting editorially on the injustice of expecting physicians to serve in the hospitals without remuneration, *The (London) Daily Mail* made the following observations:

"It may be doubted, indeed, if there is any profession which makes such sacrifices and gives so much of its time freely or at nominal fees as does that of medicine. Education for it is prolonged and costly.

The risk attending it is not small, the doctor is always, as it were, in the line of fire though the battle is with disease. He may at any moment go down in the struggle. If he survives he gives his services, practically for nothing, to the poor. Even if he establishes himself as a general practitioner, his expenses are heavy and his income in most cases not large, while his responsibilities are very great indeed. His profession is one of which the ordinary public can hardly think without gratitude and admiration for its noble work."

If it is permissible to add to this concise summary of an unjust and illogical situation, how better could public gratitude and admiration be shown than by fair compensation for the services rendered?

Precipitated Diphtheria Toxoid

Following the general state-wide distribution of diphtheria toxin-antitoxin by the New York State Department of Health in 1917, a marked decrease in the incidence of diphtheria was noted. The determination of the susceptibility of an individual by his reaction to the Shick test and his subsequent immunization by the injection of toxin antitoxin converted a disease of epidemic proportions into one whose contagiousness in the community was reduced to a minimum.

It soon was realized, however, that the use of toxin-antitoxin for the control of diphtheria presented certain disadvantages. Beside the marked systemic and local reactions which frequently made their appearance, the chief practical objection to this method was the necessity of requiring three repeated injections before immunity was obtained. In 1931, this was overcome, to a certain extent, when fluid toxoid became available for general use. This preparation required only two injections and was unattended by subsequent anaphylactic reactions to horse serum. The most recent development in the prevention of diphtheria, namely the use of precipitated toxoid, marks a further step in the more adequate control of this disease in that only one injection of 1 c.c. is needed.

An extensive investigation of the use of precipitated toxoid in over 7,500 persons has shown that it possesses distinct advantages over the other two. The reactions are not severe, and abscess formation has not been observed. Immunity to diphtheria has been conferred upon at least 90% of those injected with the precipitated toxoid; in some groups wherein retests for susceptibility were performed, the proportion of successes ranged between 97 and 100 per cent.

While at first it was believed that the use of precipitated toxoid should be limited to children under five years old, subsequent studies have shown that it can be safely employed in any age up to fifteen years. It is believed that the efficacy

of this type of toxoid is due to the precipitate which delays absorption and thus induces a longer period of stimulation.

The private practitioner can now avail himself of the improved means of immunization for his patients by applying to the district laboratory supply stations of the State Department of Health which are distributing precipitated toxoid prepared by the Division of Laboratories and Research.¹ The mere fact that only one injection is required, beside the other more basic advantages, should enable the physician more readily to convince his charges of the urgent need of immunization against this ravaging disease.

Meniere's Disease

Since the original description of Meniere's Disease in 1861, many explanations have been forthcoming concerning both the etiological factors responsible for the ailment and the therapy indicated for its cure. With the passing of time, the term "Meniere's Disease" was replaced by the more general appellation of "Meniere's Syndrome", and all paroxysmal attacks of vertigo which could not be attributed to any definite cause were collectively grouped under the latter designation. Among the causes responsible for this symptom complex, an excess of cerebrospinal fluid, a glandular dysfunction, and minute intralabyrinthine hemorrhages have been considered hitherto as the most plausible reasons for the appearance of Meniere's Syndrome.

The recent investigations of Furstenberg, Lashmet and Lathrop¹ and those of Foldes² give promise of an approach

¹ Precipitated diphtheria toxoid available for immunization. *Health News*, August 26, 1935.

² Furstenberg, A. C., Lashmet, F. H., and Lathrop, F.:—Meniere's symptom complex; medical treatment, *Trans. Am. Otol. Soc.*, vol. 24, p. 126, 1934.

² Foldes, E.:—New concept of Meniere's disease and its response to antiretentional therapy. *Am. J. Diges. Dis. and Nutrition*, vol. 2, p. 243, 1935.

to the solution of this problem. The former have determined, from their experiments, that the symptoms of Meniere's Syndrome are the result of a retention of sodium in the body. The nervous tissues which are responsible for the production of the clinical phenomena are either unusually sensitive to sodium or exhibit for it a special affinity. They have been able to stop an attack by the elimination of sodium and, conversely, they have induced an attack of Meniere's disease by the administration of sodium salts.

The conclusions of Foldes are not far different from those of Furstenberg et al. He attributes the onset of the vertiginous attacks to a local retention of fluids and minerals (mainly salt) within the labyrinth. They also are agreed upon the efficiency of elimination therapy for the control of the symptoms.

When one reviews the literature written on the subject of Meniere's Disease, one cannot help but be impressed with the futility of the therapeutic measures which until now have been advocated for its relief. Patients who are afflicted with it will submit even to a total destruction of the eighth nerve, with its attendant deafness, in order to rid themselves of their paroxysms. The favorable results of these observers should be checked and their therapeutic regime deserves trial. If their findings prove correct, the name of Meniere may again be associated with a "Disease" of definite etiology rather than with a "Syndrome" of unknown origin.

CURRENT COMMENT

IN NEW YORK CITY, the League for Less Noise has finally been established. There is to be "no politics"; the League is to be run "not for profit", but there is to be "less noise". There is no doubt that our city noises could well be abated. We wish the League success, and offer cooperation.

MEDICAL ECONOMICS has been conducting a "Location Survey." In the August issue we find these interesting figures. With thanks to this enterprising magazine we reproduce the figures for New York State as follows:—

<u>New York</u>	<u>Population</u>	<u>Physicians</u>
Colonie	1,176	None
Depew	6,536	5
Dunkirk	17,802	13
East Rochester	6,627	5
East Rockaway	4,340	2
Elmira Heights	5,061	2
Great Neck Estates.....	1,738	None
Green Island	4,331	3
Hillburn	13,03	None
Irondequoit town	18,024	3
Lackawanna	23,948	19
Little Falls	11,105	10
Massena	10,637	8
New York Mills.....	4,006	1
North Pelham	4,890	None
North Tonawanda	19,019	18
Port Dickinson	1,902	1
Rensselaer	11,223	8
Scotia	7,437	5
Sloan	3,482	1
Solvay	7,986	4
South Glens Falls.....	2,689	1
South Nyack	2,212	None
Stewart Manor	1,291	None
Watervliet.....	16,083	12
West Carthage	1,722	None
Whitehall	5,191	4
Yorkville	3,406	2

MANHATTAN in New York City claimed its 10,000 members last month for the 3 cents a day hospitalization plan. The scheme is spreading rapidly.

THE NATIONAL CONFERENCE on Legalizing Lotteries recognizes that about \$200,000,000 leaves America annually for lotteries in Canada, Ireland, France and Luxemburg for the benefit of charities. The league proposes to satisfy the American instinct for gambling and simultaneously keep the money for home charities, especially hospitals. National legislation will eventually be needed.

IN THE RECENT PUBLICATION of their annual reports, two of the great foundations which specifically are medico-economically minded, contain matter of great interest to physicians. The Twentieth Century Fund lists one of its four major activities as "The promotion of medical and hospital services on an annual fee basis." It paid \$3,500 to the Survey Associates who publish the Survey Graphic and the Survey. Thus was the issue published last year which stressed "Buying Health" paid for. It is remembered how the December issue tried to "sell" sickness insurance to the public. On the other hand, the Milbank Memorial Fund seems to have become weary of too close an identification with the promotion of compulsory health insurance. The Milbank Fund has ceased to continue its grant to the health insurance-pushing Survey Associates.

HEALTH is to be inventoried. \$3,450,000 is to be spent, if the latest project of the United States Public Health Service swings into action. It appears that public health officials are particularly anxious to harvest more data on infantile paralysis, arthritis, blindness, Bright's disease and other ills which cause incapacity for work. The survey would include house-to-house canvassing, physical examinations and investigations of medical facilities for the care of the sick in some fifty cities. Data on communicable diseases are expected to demonstrate the "woeful incompleteness" of the current system of reporting them to local health departments.

"PATRIOTISM is sometimes the refuge of scoundrels. Likewise, many times the Constitution is made the cloak for rascally injustice. . . . Most of us, most of the time, live our lives without paying great heed to the constitutional shelter under which we live. It is like a mother's love. It is ours without asking, and we enjoy its blessings so naturally that we think those sheltering wings have always been over us and always will be. Once in several generations a true test comes of our faith and our belief in, and our support of the Constitution. . . . Another time is the present, when misguided men talk recklessly of constitutional reforms, declare the Constitution outmoded, and demand its change. Under this new pressure for a change, which is

swiftly growing, it is well to ask ourselves a few fundamental questions. Do we want, in this country, a government based upon socialism or upon individualism? . . . There are only two kinds of government in the world: one, in which all rights, save those necessary for common defense and common welfare, are reserved to the individual; and the other, in which all rights of every kind are subordinated to the state. We cannot have a government which is part one and part the other. Sooner or later, it becomes wholly one, or wholly the other."—These are the wise words of Frank Knox, Guest Editor of the American Legion, writing in its September issue. Steps toward socialism, usually begin by bribing the population. The socialization of medicine has been one of the known steps in a procedure which begins by regimenting the medical profession, and ends in suppressing individualism generally.

FROM WASHINGTON, via the New York *Times* of August 28th, comes the news that nine cities and nineteen states were to be subjected to survey by the Public Health Service. The cities are Birmingham, Chicago, Baltimore, Detroit, St. Louis, Trenton, New York, Dallas and Richmond. States selected are Massachusetts, New York, New Jersey, Maryland, Virginia, Pennsylvania, Ohio, Georgia, Minnesota, Michigan, Illinois, Missouri, Utah, California, Washington and Oregon.

EXTENSION EDUCATION IN PHYSICAL THERAPY

One of the aims of the Council on Physical Therapy of the American Medical Association, is to promote extension education in physical therapy.

The Committee on Education of the Council believes that one of the best ways of extending postgraduate instruction in physical therapy, is to arrange for practical talks to be given before state, county, or other medical societies. Experience, especially in New York and Pennsylvania, has shown that such programs are eagerly received by the profession.

The Council is prepared to assist medical societies by furnishing general advice as to programs and by suggesting qualified personnel.

The following topics are offered as being of interest to the general practitioner:

The Present Status of Physical Therapy
Physical Therapy in General Practice
Body Mechanics and Posture Training
Massage—Indications and Effects
Pathological Conditions Helped by Physical Therapy

Therapeutic Exercise
Radiation Therapy
Hydrotherapy
Fever Therapy
Diathermy, Medical and Surgical, Including Short Wave

Motion pictures on the following subjects are available for loan:

Massage—Technic
Graduated Active Motion
Occupational Therapy
Effects of Heat and Cold on Blood Circulation
Effects of Massage on Blood Circulation

In addition, exhibits on physical therapy can be arranged in conjunction with the Committee on Scientific Exhibit, available on request.

Anyone desiring help in program planning or loans of films or exhibits is advised to write the Secretary, Council on Physical Therapy, A. M. A., 535 North Dearborn Street, Chicago, Illinois.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

112 EAST 74TH STREET
NEW YORK CITY

To the Editor:

As a physician who has received many inquiries this summer from anxious parents regarding the treatment and prevention of poliomyelitis I am availing myself of your columns to protest against the widespread press publicity which has attended the attempts to produce a potent therapeutic serum and a successful prophylactic vaccine ever since the great epidemic of 1916.

The efficacy of sero-therapy is certainly extremely questionable as agreed on by most students of the disease, especially here in the east. The attempt to produce a satisfactory vaccine is of course not new, similar animal experiments to those conducted recently by the Research Laboratories of the New York City Department of Health being carried out in 1916 by Abramson and Gerber, if my memory serves me correctly. Without meaning in any way to decry the excellent research work being carried on both in New York City and Philadelphia, it should be pointed out, that, due to the extremely low incidence of the disease (probably not more than one in 500 even in severe epidemics) it will be necessary to inoculate a tremendous number of children (at least 50,000) before definite *clinical proof* of the efficacy of any vaccine is forthcoming. When one further considers that cases in considerable number occur only in relatively rare epidemics, usually in different

parts of the country and under diverse conditions, and that in the interim between inoculation and exposure many children may be developing a natural immunity either through subclinical immunization or by "maturation," it is evident that the problem is far from simple, and will require a long period of time for solution.

My criticism of this particular type of newspaper publicity is two-fold; first that it raises false hopes in the minds of most parents and second that it throws a terrific onus on the practicing physician who is subjected to great pressure from his patients to employ measures which he knows are still in the experimental stage and without adequate clinical trial. It seems high time that the public be given information, preferably emanating from some authoritative source such as the New York Academy of Medicine, of the exact truth about the matter,—namely, that at present there is no specific treatment nor any proven method of preventing the disease. It appears to me infinitely more sensible for the physician to tell anxious parents the precise truth, and then to reassure them with the statement that, due to the extremely low incidence of the disease there is probably less chance of a child in New York City contracting infantile paralysis even in epidemic times than there is of his being maimed or killed by an automobile.

JOHN F. LANDON, M.D.

September 4, 1935

"THE RADIUM HEN"

An instrument to assist hospitals that have lost or mislaid radium needles has been invented in the British National Physical Laboratory. It has been called "the radium hen," because it clucks like a hen when placed near radium, and the nearer it is the more rapidly and excitedly it clucks. It has been used to find a radium needle suspected of having been washed down a hospital sink. Water poured down the sink had been tested for radioactivity without result. Every trap in the waste pipe had been taken out and still there was no trace of the needle. Then the "radium hen" was tried and quickly led by its clucking to the point in the pipe at which the needle was lodged.

In appearance the instrument is not unlike a garden syringe, but behind its brass-cased

head is a neon lamp and a trail of "flex" leading to a box of high tension electric batteries says a London letter in the *A.M.A. Journal*. The neon glows when the electric pressure is sufficient to cause a discharge through it. Here the pressure is adjusted so that the lamp will just not light. The radium radiation, as it were, pulls the trigger. The lamp has to be kept covered, as it is sensitive to daylight. It therefore cannot be used as an indicator. This is provided by the electric current, which flows through the lamp when it is alight. This current is converted into sound either by the use of head phones or by a loud speaker, which clucks in correspondence to the flashing of the hidden lamp.

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF WORKMEN'S COMPENSATION

BEKANTMACHUNG

UWAGA

NOTICE

AVVISO

תשנ"ה

The undersigned employer hereby gives notice that he has complied with the provisions of the Workmen's Compensation Law and the rules of the Industrial Board of the State of New York, and that he has secured the payment of compensation to his employees, and the dependents of employees, engaged in the hazardous employments enumerated in the said law. Such compensation has been secured to such employees, in accordance with Section 50 of the Workmen's Compensation Law, by insuring with:

NAME OF INSURANCE COMPANY _____

Policy Number _____ Policy in Force From _____ To _____

Employer

By _____

TO EMPLOYERS

- 1—The employee has the right to select any authorized physician.
- 2—You may recommend the name of an authorized physician to an injured employee if requested to do so in writing after an accident.
- 3—You shall not ask for or accept a waiver from any employee depriving him of his right of free choice of an authorized physician before an accident occurs or at any time as a condition of employment.
- 4—The employer should immediately give the injured employee the name of the company in which he is insured.
- 5—If the injured employee does not wish to choose a doctor and so notifies you in writing after the accident you must then provide him with medical care. This however does not prevent your employee from choosing an authorized doctor (on the panel) at a later date if he so desires.
- 6—In the event of a serious accident requiring immediate medical aid an ambulance or any doctor may be called to give first aid treatment.
- 7—You are not permitted to display the name of any physician on your premises.

(This notice must be posted and maintained in a conspicuous place in and about the place of business and should also be posted at each principal entrance used by the employees.)

FORM 6-146 4-10-33 (10-2-1937)

TO EMPLOYEES

If you are injured or suffer an occupational disease while working on or after July 1st, 1935 observe the following:—

- 1—Each injury, however trivial it may be should be promptly reported to the employer, his superintendent or foreman.
- 2—The Workmen's Compensation Law allows you to select a doctor authorized (on the panel) to treat workmen's compensation cases.
- 3—Look for the doctor's authorization number from the Industrial Commissioner when you go to the doctor selected. If you choose an unauthorized doctor (not on the panel) you may have to pay the bill yourself.
- 4—If you do not wish to choose a doctor you must notify your employer in writing. The employer must then provide you with medical care but you are not prevented from choosing an authorized doctor (on the panel) at a later date if you so desire.
- 5—If for some reason you transfer treatment to another authorized doctor (on the panel) notify your employer or his insurance carrier at once and give the reason. Failure to do this may stop your compensation.
- 6—Your employer or his insurance carrier may have you examined if they wish but you may have your physician present. If you do not submit to such examination you may not be paid for the period of such refusal.
- 7—Your employer has the right to transfer you to the care of another authorized doctor (on the panel) for the following reasons:
 - (a) if it is to your interest
 - (b) if your doctor is not authorized (on the panel)
 - (c) if your doctor is not authorized to treat your kind of injury
- 8—SOLICITATION PROHIBITED. Any person who shall make it a business to solicit employment for any person authorized by this chapter to render medical care to an injured employee in connection with any claim under this chapter shall be guilty of a misdemeanor.

The first medical attention is of the utmost importance and very frequently makes unnecessary future pain, suffering and disability. Therefore, seek medical aid at once. If your employer maintains a first aid department seek medical aid at the medical office without delay.

The best medical aid is available to you and care in promptly selecting the attending physician in the first instance will mean much for your future welfare and comfort.

EXCEPTION: This notice does not apply to persons injured outside of this State although entitled to compensation benefits under the New York State Workmen's Compensation Law.

Edw. F. Anderson
Industrial Commissioner

Society Activities

Committee on Workmen's Compensation

COMMUNICATION No. 10

Fees for Pathology and X-Ray. We now advise that the fees collected for such medical care of injured workmen, when the service is rendered in a hospital, shall be impounded in a special account, whether collected by the physician or the institution.

When certain contingent questions have been settled and announced, such as the "minimum fee schedule," the fair and proper allocation and disbursement of the fund can be made upon the established terms as of July 1, 1935, et seq.

Negotiations toward a friendly and satisfactory understanding with the officers of the State Hospital Association are progressing. We anticipate the establishment of an agreement not later than October 15, 1935.

Some employers continue the exercise of their will over their employees in the selection of a physician, and some physicians still permit their old public posted announcements to remain in place.

The Industrial Commissioner has, in preparation, a placard of instructions to the "Employees" and to the "Employers." When these are available and distributed, it is probable that further occasion for complaint will not be experienced in this direction.

Physicians should be warned that a placard which posts the physician's name lays him liable to a charge of "solicitation."

There has been some delay in the development of rules, regulations, fee schedules, etc., due to the advent of the "vacation season."

The following memorandum, and copy of an official placard (see facing page) have been received and are here reproduced for the information of all members. Special attention is called to section 7 under advice to employers and section 8 of advice to employees.

MEMORANDUM TO THE SELF INSURED EMPLOYER

The enclosed notices are copies of the notice prescribed by the Industrial Commissioner, informing employees of their privilege under Chapters 258 and 930 of the Laws of 1935, and also sets forth the rules and regulations promulgated by the Industrial Commissioner for the guidance of the employers.

Each such employer should please arrange to have a sufficient supply of this notice printed, and such notice is to be posted and maintained by the employer in a conspicuous place in and about his place or places of business.

ELMER F. ANDREWS,
Industrial Commissioner.

CHARLES GORDON HEYD, M.D., *Chairman*
DAVID J. KALISKI, M.D.
FREDERIC E. ELLIOTT, M.D.

Committee on Economics

AUGUST BULLETIN

August 30, 1935

C.W.A. (Civil Works Act.) This has gone the way of "all soup." Physicians who have outstanding and unsettled accounts for service to beneficiaries under this Act should write the U. S. Compensation Commission, Washington, D. C. Give dates, name of patient and identification of any previous correspondence, make the itemization of the account clear. If you don't get action, see your Senator or Representative—by letter.

F.E.R.A. (Federal Emergency Relief Act.) In New York T.E.R.A. (Temporary E.R.A.)—The Federal government will discontinue its part about the middle of September. The State administration continues with prospect of development of a character of permanency. "The green book, Regulation No. 7," is being revised.—The new issue will appear probably about September 15th to October 1st. (We hope to complete the development of plans by which the "panel of physicians under the Work-

men's Compensation Law" may participate in the work of this relief agency—upon the same terms and conditions as laid down in Chapter 258 of Laws of New York State for 1935, for the care of industrial workers. Don't assume this to be fact until further announcement.)

W.P.A. (Works Progress Act.) The administration set up to spend the four billion fund voted by the recent Congress. There will be a program of work relief in place of doles. "Security wage" will be less than A.F.L. union wages this issue is still unsettled. Injured workmen are made special beneficiaries of the U. S. Compensation Law.

Administration of the provision of medical care for those injured workmen will be out of Washington, through a local State authority. Again we hope to establish participation in this work on the same terms and conditions as now set up for injured workmen under our State law.

Our advice to any physicians who is

called upon to render care of such injured person is to give the service and render a bill promptly, fee of same amount as now is charged for ordinary compensation cases of like character in the local community. Be sure to make the bill show the character of service—remember that it is to be paid not by the head of the family who knows all about the incident of injury and the subsequent events of care, but by a stranger who must audit it purely on the written evidence. Don't leave too much to his imagination. If any bill is not paid within

sixty days, or if any discount of more than 10 per cent is made by the Auditor—please notify the chairman of the State Economics Committee.

"Rules and Regulations No. 1, U. S. Employees' Compensation Commission"—we are sending one copy to the secretary and one to the chairman of the Economics Committee in each County Medical Society.—By understanding we may cooperate intelligently—to our own financial betterment.

COMMITTEE ON ECONOMICS

District Branch Meetings

Third District Branch Program

HENDRICK HUDSON HOTEL
BROADWAY AND SECOND STREET
TROY, N. Y.

Tuesday, September 24, 1935

MORNING SESSION

Operations and Clinics at the Troy, Samaritan and Leonard Hospitals.

The Maternity Hospital, Pawling Sanatorium and Marshall Sanatorium will also be open for inspection.

Program of operations and clinics will be at Hotel Headquarters.

12:00 M., luncheon, Hendrick Hudson Hotel and introduction of guests.

AFTERNOON SESSION 2:00 P.M.

1. "Gastric and Duodenal Ulcer Treatment from a Surgical Viewpoint." Warren Wooden, M.D., Rochester.

2. "The Clinical Manifestations of Autonomous Nervous System Imbalance." Clement J. Handron, M.D., Troy.

3. "Illustrated Uterine Cancer," four lanterns used simultaneously. Louis C. Kress, M.D., Asst. Director, State Institute for Malignant Disease, Buffalo.

4. "Legal Aspects of Malpractice." Hon. Thomas H. Guy, Troy.

5. "Mortality Factors in Thyroid Surgery." Eldridge H. Campbell, Jr., M.D., Albany.

Fourth District Branch Program

GIDEON PUTNAM HOTEL
SARATOGA SPRINGS, N. Y.
(Daylight Saving Time)

Friday, September 27, 1935

2:00 P.M.

1. "Modern Treatment of Lobar Pneumonia." Russell LaFayette Cecil, M.D., New York City.

2. "Empyema." Ambrose L. Lockwood, M.D., Toronto.

3. "Complications of Pneumonia." L. Whittington Gorham, M.D., Albany.

7:00 P.M.

Dinner at the Gideon Putnam Hotel.

Address: Frederic E. Sondern, M.D., President of the Medical Society of the State of New York.

Saturday, September 28, 1935

9:30 A.M.

1. "Recent Developments in Thoracic Surgery." Howard Lilienthal, M.D., New York City.

2. "Internal Use of Mineral Water." Walter D. McClellan, M.D., Saratoga Springs.

3. "The Importance of Psychiatry in Medical Education." Grant C. Madill, M.D., Ogdensburg.

4. "Management of Uterine Bleeding." Thomas P. Farmer, M.D., Syracuse.

Fifth District Branch Program

BLACK RIVER CLUB
WATERTOWN, N. Y.

Tuesday, October 1, 1935

MORNING SESSION

1. Opening Address of Welcome, David G. Gregor, M.D., President Medical Society of the County of Jefferson.

2. Some Suggestions on Post Operative Treatment, Murray M. Gardner, M.D., Watertown.

3. Lesions of the Colon, Dan Mellen, M.D., Rome.

Election of Officers.

Remarks by State President.

Lunch at Club.

AFTERNOON SESSION

Symposium on Silicosis.

1. Tuberculosis and Trauma, Charles C. Trembley, M.D., Saranac Lake.

2 *Diagnosis of Silicosis, lantern slides*, Daniel M. Brumfiel, M.D., Saranac Lake
3 *Silicosis in Industry*, O. G. Browne, Asst. Gen. Claims Att. for New York Central Lines, New York

Sixth District Branch Program

RATHBUN HOTEL
ELMIRA, N. Y.

Wednesday, September 18, 1935

MORNING SESSION
9 30 A.M.

(EASTERN STANDARD TIME)

(SESSIONS WILL START PROMPTLY)

1 *Cough and Hemoptysis*, Ethan T. Butler, M.D., Elmira
Discussion: Earl W. Wilcox, M.D., Norwich

2 *Management of Delayed Union, and Non-union and Malunion of Fractures of the Long Bones (illustrated)*, Herbert M. Bergamini, M.D., Associate Professor of Surgery, Columbia University and Surgeon to the Post Graduate Bellevue and Reconstruction Hospitals, New York City

Discussion: Charles M. Allaben, M.D., Binghamton

3 *Activities of the American Medical Association (illustrated)*, Austin A. Hayden, M.D., Secretary of the Board of Trustees of the American Medical Association, Chicago, Ill. (by invitation)

Discussion: Henry E. Merriam, M.D., Ithaca

4 *The Treatment of Burns (illustrated)*, Leon E. Sutton, M.D., Associate Professor of Surgery, Syracuse University, Syracuse
Discussion: Henry B. Sutton, M.D., Ithaca

1 00 P.M. Luncheon

AFTERNOON SESSION

2 00 P.M. Business Session Election of Officers

5 *Address*, Frederic E. Sondern, M.D., President of the Medical Society of the State of New York, New York City

6 *The Prostrate and Adnexa considered from the standpoint of Obstruction, as a potential focus of Infection and of other Constitutional Manifestations (illustrated)*, Joseph F. McCarthy, M.D., Executive Officer of the Department of Urology, New

York Post Graduate Medical School, Professor of Clinical Urology, Columbia University, New York City

Discussion: Elliot T. Bush, M.D., Elmira
7 *The Abatement or Cure of Malignant Hypertension by Dekinetization*, George W. Crile, M.D., Cleveland, Ohio, Director of the Cleveland Clinic Foundation, Surgeon, Cleveland Clinic Hospital (by invitation)

Discussion: Ross G. Loop, M.D., Elmira
Entertainment provided for the ladies

The Sixth District Branch comprises the counties of Broome, Chenango, Chemung, Cortland, Delaware, Otsego, Schuyler, Tompkins and Tioga, and its officers are:

President: John E. Wattenberg, M.D., Cortland
First Vice-President: Leo P. Larkin, M.D., Ithaca
Second Vice-President: Reeve B. Howland, M.D., Elmira
Secretary: Hubert B. Marvin, M.D., Binghamton
Treasurer: William A. Moulton, M.D., Coudor

Seventh District Branch Program

VETERAN'S HOSPITAL
CANANDAIGUA, N. Y.

Thursday, September 26, 1935

MORNING SESSION

1 *"The Fractured Calcaneus"*, Edward T. Wentworth, M.D., Rochester

Discussion opened by—Raymond F. Johnson, M.D., Auburn

2 *"Anaemia"*, Nelson G. Russell, M.D., Buffalo

Discussion opened by—Thomas W. Maloney, M.D., Geneva

3 *"Announcements"*, Hans Hansen, M.D., Manager, Veterans' Hospital

1 00 P.M. Luncheon, \$75

AFTERNOON SESSION

1 *Address*, Frederic E. Sondern, M.D., President Medical Society of the State of New York

2 *"Susceptibility, Immunity and Vaccination in Infantile Paralysis"*, John A. Kolmer, M.D., Philadelphia, Pa.

Discussion opened by—Wardner D. Ayer, M.D., Syracuse

3 *"Clinical Management of Obstructive Jaundice"*, Howard M. Clute, M.D., Boston, Mass.

Discussions opened by—Warren Wooden, M.D., Rochester

SOCIETY OF PLASTIC AND RECONSTRUCTIVE SURGERY

The Annual Meeting of the Society of Plastic and Reconstructive Surgery will be held at the Hotel Statler, Detroit, Michi-

gan, October 18 and 19, 1935. Members of the medical profession are invited to attend.

County Societies

Bronx County

A RATHER TENTATIVE "FEELER" appears in the *Bronx County Medical Bulletin*, hinting that a physicians' orchestra may soon lend harmony to the monthly meetings. The notice closes with the plea: "Brother, if you can fiddle, please send in your name."

A SERIES OF ADDRESSES on public health will be given over Station WBNX under the joint auspices of the Bronx Tuberculosis and Health Committee and the Bronx County Medical Society.

Cattaraugus County

THE CATTARAUGUS COUNTY MEDICAL SOCIETY held an interesting meeting on August 20 at the Rocky Crest Sanatorium at Olean. After an inspection of the hospital and various cases under treatment, dinner was served, followed by a scientific program.

Erie County

EIGHTEEN CASES of a severe gastro-enteritis, two of which were fatal, occurred in five different households in Buffalo during the first week of July. These cases were said to have occurred after eating cocoanut cream pie which came from a common source and it is assumed that this was the only food eaten by all persons affected.

Herkimer County

TWO HERKIMER DOCTORS hit upon a happy plan for their vacations when Dr. H. C. Murray took a voyage to Porto Rico and San Domingo as ship's surgeon on the S.S. *Borinquen* as a substitute for Dr. Frederick Devendorf, also of Herkimer, who was thus permitted to have a holiday ashore.

Kings County

DR. BELA HALPERT, assistant of pathology and surgery, Yale University School of Medicine, comes to the Jewish Hospital of Brooklyn to head the division of pathology and as associate director of the department of laboratories. This announcement is made by Joseph J. Baker, president of the hospital.

Dr. Halpert is a graduate of the University of Prague in 1921 and has taught in the universities of Budapest, Prague, Frankfurt-am-Main, Johns Hopkins, Chicago, and Yale.

"IF OUR young people go on at the present

rate, each home will have one lap dog and no children," was one of the sayings of Dr. Mary E. F. Fleckles, of Brooklyn, who died on August 15 at the age of 71. She had practiced medicine in Brooklyn over 40 years.

She devoted many years of her life to the work of caring for homeless girls through the agency of the Brooklyn Welcome Home, which has been a temporary haven for the stranded girl, the deserted wife and girls who have run away from unfit homes and who have been picked up by the Missing Persons Bureau. The organization was started in 1915 and Dr. Fleckles had been connected with it ever since.

Dr. Fleckles was a member of the visiting staff of the Methodist Home for the Aged, the consulting staff of the Cumberland Hospital and the staff of the Prospect Heights Hospital.

New York County

TWO PHYSICIANS were dismissed from the Correction Hospital on Welfare Island in August for sending Salvatore Spitale, of underworld fame, to the infirmary when he had been assigned to pick and shovel work.

Commissioner Marcus said that both doctors had been on the department rolls less than a year, and had excellent reputations in every way.

Neither doctor is alleged to have acted from improper motives. Their dismissal was based, instead, upon the theory that in dealing with prisoners as widely publicized as Spitale they should have consulted their superiors and have taken particular pains to see that no suggestion of favoritism could be advanced.

SCHOLARSHIPS totaling \$16,145.72 have been awarded to fifty-eight students of the Columbia University Medical School. The scholarships range from \$100 to \$250 each. Four were awarded to women. Seven awards went to first year students, nineteen each to second and third year students, and thirteen to students in their last year.

Monroe County

DR. FLOYD S. WINSLOW, President-elect of the State Medical Society, and Mrs. Winslow entertained 100 former fellow pupils of the East Henrietta High School at a picnic at their country place, on August 10. Mrs. Winslow was president of the group, which meets every year.

Oneida County

A LITTLE FALLS PHYSICIAN, Dr Vangura, new in local trapshooting circles, led the pick in the 25 bird handicap feature event at the shoot of the Utica State Hospital Gun Club on the Parkway grounds Aug 6. Del Capes, veteran member of the Marcy State Hospital baseball team, and Guy Kretser, Little Falls, finished in a three way tie with the doctor on perfect scores of 25 each. Vangura won the toss for the prize, a thermos jug.

Queens County

A DECISION handed down on Aug 13 by Supreme Court Justice Thomas C Kadish in *Jamrica Special Term* rules that a druggist is practicing medicine without a license when he recommends or sells unpentented medicines over the counter without prescription according to a report in the *Brooklyn Eagle*.

The case was brought about when Max Shevlin, doing business under the name of the Renspak Chemist, Inc at 32-09 Junction Ave Corona charged that he had been slandered by Dr Samuel M Klein also of Corona. Dr Klein accused Shevlin with prescribing a medicine to a woman for her husband without a physician's prescription.

Dr Klein, in answer to the slander charge, held that he was justified in making the accusation. Shevlin on the other hand, held that he had the right to dispense unpentented medicines over the counter.

Henry Albert of Long Island City, counsel for Dr Klein, said that Dr Frederic E Elliott of Brooklyn, chairman of the economic committee of the State Medical Society, is backing his client and has written to Dr Harold Rypins, executive secretary of the University of the State of New York, urging thorough investigation.

'The question has been a thorn in the side of the medical profession for years' Dr Elliott said in his letter.

Dr Klein is president elect of the Long Island Medical Society and attending surgeon at St John's Hospital, Long Island City.

Rensselaer County

CREDIT for the reduction of tuberculosis to a small fraction of its former high figure in Troy is given to the work of Dr Harry W Carey, who fell dead from heart trouble on Aug 14 while making his rounds at the Samaritan Hospital. He organized the Troy Tuberculosis Relief Committee and later led the movement to establish the Pawling Sanitarium. He also had a large private practice, was active in the County Medical

Society, and took a great interest in educational work.

Schenectady County

INITIAL PLANS for the celebration by the Schenectady County Medical Society of the 125th anniversary of its founding in 1810 are announced by Dr Frank van der Bogert, chairman of the program committee.

The affair will be marked by a dinner meeting the night of October 12, at which Dr Francis Packard of Philadelphia, probably the outstanding medical historian in the United States today, will be the principal speaker. His topic will be "The Founders of American Surgery."

IN CONNECTION with the celebration ceremonies it is hoped that an exhibit of manuscripts, books and relics relating to early medical history in Schenectady county and the Mohawk valley can be arranged.

In order to make such an undertaking possible the society requires the co-operation of residents of the city and county and has asked that anyone possessing articles of medical interest communicate with Dr van der Bogert at 111 Union street telephone 4 8524.

Loans made to the society will be carefully protected and returned immediately following the conclusion of the exhibit. Insurance against loss will be provided where necessary in the case of valuable articles.

Fifth Labor District

THE PROCEDURE to be followed by workmen's compensation boards of medical societies in the five counties of the Fifth Labor district in nominating physicians for consultation in obscure or unusual conditions was decided upon at the first joint meeting of the five boards on August 14 in Buffalo.

It was decided to permit each county board to recommend its own panel to The Medical Society of the State of New York which in turn will recommend the panel to the state industrial commissioner.

Counties represented at the meeting were Allegany, Cattaraugus, Chautauqua, Niagara and Erie. The discussion was led by Dr Guy S Philbrick of Niagara Falls. Dr Luther M Jayne of Niagara Falls. Dr C H Richards of Dunkirk. Dr Raymond S Barry of Niagara Falls. Dr Thomas S Shanahan of Jamestown. Dr W C Goodlett of Olean, and Dr Joseph C O'Gorman chairman of the public health committee of the Medical Society of the County of Erie. Dr Herbert H Baucus, president of the Erie county society, was elected chairman of the joint compensation boards and Dr Joseph P Garen of Olean secretary.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Physicians' Choice of Methods

A case* involving the extent to which a physician may choose methods of procedure in treating a patient came up recently in one of the mid-western states, and the decision handed down is one which should be of interest to all members of the medical profession.

The action was brought against the physician defendant by a widow who claimed, that due to the negligence of the doctor in caring for her husband, he had died. Several years before his death, the patient had contracted tuberculosis and had spent a year in a sanatorium in Colorado. On leaving there, he had been advised to continue with pneumothorax treatments, and was referred to the defendant who was the physician in charge of a county tuberculosis hospital. He received such treatments from the defendant from time to time over a period of about four years. At the end of that time he sought expert advice elsewhere and was advised to undergo a thoracoplasty.

Before any such operation was arranged, the patient in mid-winter contracted influenza with bronchial complications, and was referred to the defendant's hospital where he remained until his death about two months later. Fluid was found in the patient's lung, and a week after admission, an operation for the treatment of the condition was performed by a surgeon of distinguished reputation called in for the purpose. The defendant remained in general charge of the case and at times removed pus from the lung by aspiration. Four weeks after the operation the defendant discovered that a sinus had developed between the pleural cavity and the outside, and two days thereafter he instituted permanent drainage by means of a catheter inserted between the ribs, which was connected to a longer tube. The presence of the catheter caused discomfort to the patient, and after about two weeks the defendant removed it and inserted in its place a tube three or four inches long. This tube was anchored by being wrapped with adhesive tape which was stuck to the patient's body. The morning after it had been put in place, the tube was missing; it having slipped loose and receded into the man's body. It could not

be retrieved, but a subsequent autopsy established its actual presence within the body.

Prior to this happening, the physician had requested the patient's wife to engage the services of a surgeon, but due to some delay he did not come into the case until after the tube had vanished, although the defendant had made repeated attempts by that time to obtain a surgical consultant. The surgeon, Dr. M., finally went to the hospital, obtained a full history of the situation, examined x-ray and fluoroscope findings, and advised a prompt rib resection to provide better drainage. The surgeon performed the operation two days after the disappearance of the tube, and the patient died within a few hours after the completion of the operation.

In the action which was brought against the defendant, charging him with responsibility for the death of the man, the claim of negligence centered around the charge that he had failed to properly fasten the short drainage tube. There was a further claim, that he had violated the rights of the patient's wife in not making full disclosures to her and obtaining her consent before arranging the operation. There were other charges of negligence made, but they were relatively of little importance in determining the questions which eventually were reviewed by the Appellate Court.

Upon the trial of the case, the plaintiff called certain witnesses who testified that the customary practice of the community and in use in similar localities with respect to fastening a tube such as was used, was to use a safety pin in addition to taping. One of the witnesses so called, a certain Dr. T., the physician who had performed the autopsy, testified in part as follows:

Q. What kind of tubes are used for drainage in the pleural cavity by physicians and surgeons of ordinary skill, experience, and ability in this or similar localities?

A. I use a half-inch thick tube.

Q. How do you fasten the tube?

A. I usually put a safety pin at the end of the tube and fasten it to the side of the body, by adhesive plaster, nine or ten inches long.

Q. Have you ever seen a rubber tube inserted to drain empyema, fastened with a small strip of adhesive?

A. No, I use the safety pin at the end of the tube.

* Rytkenon v. Lojacano, 257 N. W. 703.

He was also permitted to testify that he had seen the safety pin method used at certain renowned hospitals. Neither the said witnesses, nor any of plaintiff's witnesses, testified that the method employed by the defendant was not recognized as proper practice. The defendant's medical witnesses testified specifically that the method used by him was in accordance with proper practice, although most or all of them generally used a safety pin themselves.

With the testimony in such shape, a large verdict was rendered against the doctor, and he took the case up on appeal. The Appellate Court reversed the judgment which had been entered against the doctor, and ordered a new trial, finding that the evidence given by the doctors who testified for the plaintiff had been in large part incompetent. In so ruling, the Court said in part:

Defendant is not to be charged with the peculiar skill or methods of practice used in famous medical institutions. Nor is the treatment another physician would have used under the circumstances, a test. The rule is firmly established that defendant was bound to use the degree of diligence and skill which is ordinarily possessed by the average of the members of the profession in similar communities. Dr. T.'s testimony was not cured by a general statement that his methods have been used by physicians in the same and similar communities. He did not say other methods were not recognized as proper.

Plaintiff claims, however, the error was not prejudicial because most of the other doctors customarily use the safety pin method. We think, however, the case has features which render it particularly inadvisable that the rule be here relaxed. It would be rather natural for a jury to incline toward condemning the method used by defendant because of the fact that the tube slipped (*res ipsa loquitur*), and also because the safety pin method appeals to the layman as mechanically safer. Such inclination makes it especially necessary that the issue be kept clear and not confused. Defendant's liability does not rest upon the methods actually used by other doctors of the vicinity or elsewhere, but upon what is recognized by them as good practice. Where there is an opportunity for choice, the doctor is not guilty of negligence in using a method so recognized, even though all his local contemporaries may employ another method. Dr. T.'s failure to state whether the method used by defendant was permissible would permit the jury to infer that he thought it was not, without his saying so.

Upon the point as to the necessity of the wife's consent to the operation, the Appellate Court ruled that such consent was unnecessary because her husband was able to give his own consent.

Treatment of Colles' Fracture

A woman, 49 years of age, sustained a Colles' fracture of the wrist and was taken to a hospital where the fracture was reduced with the bones in good alignment. It appeared that her injuries were sustained in the course of her employment and, within a few days after the operation, she was referred by her employer's insurance carrier to a general practitioner in order that he might follow up the treatment of the case.

When the doctor first saw her, the patient still had on her arm the original splints that had been applied at the hospital. He made the splints comfortable and reapplied them and kept her under observation for about three months.

The patient subsequently brought an action against the doctor charging him with malpractice, and on the trial of the action she made a claim that the defendant within a week after she first saw him, applied a circular plaster-of-paris cast to her arm which extended from the elbow down to and including the tips of her fingers. This the defendant denied, saying that he left on the original splints which had been applied at the hospital at the time the fracture was reduced, and he insisted that he had never applied to the plaintiff any plaster-of-paris cast or splint. The plaintiff's testimony also included a statement that the defendant permitted the circular cast to remain on the arm for a period of three months, and the doctors who testified upon the trial were in general agreement that the putting on of such a cast for such a length of time would have been bad practice under the circumstances. The question in the case, therefore, was reduced practically to an issue of veracity between the patient and the doctor as to whether he did in fact apply the cast.

The issues in the case were submitted to the jury, and at the close of all the testimony the jury returned a verdict in favor of the defendant, thereby exonerating him from the charges of malpractice.

"MILK BARS"

A series of "milk bars" are being opened in London, like similar bars in the United States and Australia. It is quite a new idea to the British, who have never before thought of milk in connection with bars. It is intended to serve about 50 different

non-alcoholic drinks with milk as a basis.

It is stated that in Australia the milk bars have created a milk-drinking habit which has its reaction in the home, and that in New South Wales they practically doubled the consumption of milk in one year.

Across the Desk

HUMAN SACRIFICE is supposed to have gone out of style some centuries or eons or ages back. We shudder at those old heathen days when the Druid priests colored their bare bodies a tasty blue and deftly slit the throat of the squirming human victim bound on the stone altar with willow withes. Pious religious teachers, too, have now induced the South Sea islanders to give up their playful habit of sacrificing captured enemies to their hideous deities. That was all the rage out there not so long ago. Even now it is whispered that human blood is spilt in secret voodoo rites in the African forests and perhaps in the jungle depths of Haiti.

The clever thing about this rather ghastly habit is that you sacrifice the other fellow for your sins. You don't pay for them by your own suffering, but "let George do it." (George gives up his life, and you get the benefit. Smart. No wonder it was hard to root such a grand scheme out.

But is it rooted out? Would it surprise people if we were to say that human sacrifice is going on in this land of the free right now? Anything as clever as that is pretty hard to uproot. It merely changes its form. The priests no longer prance around with bare bodies painted blue, but they are sacrificing human victims just the same, and it is for their sins that the victims die. Like everything else in our splendid land, too, it is done on the grand scale. It is "big business." Druid achievements are nowhere. In fact, the Druid would own himself outclassed, hang his head in shame, and a scarlet flush of embarrassment would aptly tint him with our national colors, red, white and blue.

Examples? Well, here is one from a daily paper in Los Angeles dated July 13, 1935. We read:

"Death was the price paid today by Frances E. Jacques, twenty-four, for slenderness. According to physicians at the General Hospital, the young woman died there this morning from an overdose or an accumulation in her system of dinitrophenol, a drug which recently has come into use to reduce overweight. . . ."

This form of human sacrifice is growing to such proportions that protests are appearing widely in the medical journals. Advertisements fill the newspapers blaring the claims of "obesity cures," some totally ineffective and harmless, some containing thyroid extract and iodol and dangerous unless taken under medical advice. The same rule holds as in the dark groves of

ancient Britain. The exploiter sins, and the victim pays with life. Drug store shelves sag under the weight of slenderizing pills, wafers, foods, soaps, bath salts, creams, gum drops, teas and capsules, which are handed promiscuously over the counter to any one who asks. And where the Druid priest got a fox-skin or a piece of fish, our human sacrificers collect their millions, and pay millions to the press for touting their wares.

Here is another. "We can never forget," says a Detroit medical writer, "the case of an old man presented before a clinical-pathological conference who had died of a perforated gastric ulcer after taking a dose of a highly-advertised cathartic, praised nightly on a well-known program as a quick, reliable, and harmless remedy for stomach distress. The evils of self-medication which contribute so largely to the continued high mortality rate of appendicitis alone will never be eradicated as long as this situation is allowed to exist." Happily some of the radio broadcasting chains are eliminating the most offensive medical advertisers, but, as the Detroit writer adds, "this is only a beginning; the Augean stables need more than a deodorant."

We may go on to the less deadly swindlers and may smile, perhaps, at our third- and fourth-rate Druids of today who merely sacrifice the health of their victims instead of taking their lives; we may smile at their flim-flam, but it is no joke to the unlucky folks who are fleeced. We read in the newspapers that "three vanished 'spook doctors' took \$3,450 away from Mrs. Margaret Carillo of 654 Castella St. as a fee for getting 'invisible spirits' to heal her of a stomach disorder." The handsome villains who took her cash are said to have hocus-pocussed various trustful people out of around \$100,000. Another medical miracle-man posed as a "goat-gland specialist," until the police "got his goat," if we may be permitted to use the expression. Then we read of a firm (address not stated) which ought to have the medal for business efficiency. It blesses handkerchiefs at so much each, and the poor, deluded invalid even furnishes the handkerchief! One of the instructions, it appears, is that the patient must not eat during the treatment; meanwhile the handkerchief charms the illness away. One invalid starved himself ten days and was discovered by a neighbor in a fainting condition. Even then "the man was so firm in his belief that he would recover that it took several hours to convince him that unless

he consented to have medical attention and took nourishment, he would die. Later he was taken to a hospital, and it is said he will recover." There is also quite a sale in some parts of our more or less enlightened (or "lit-up") land for "magic stones" that are supposed to banish pain when applied to the afflicted region. Indeed, there is almost no limit to this sort of thing. The above items are garnered from only a few clippings of court reports. The number who never land in court must be legion. As you read these lines, there is no possible doubt that hundreds, perhaps thousands, of scalawags are leading the human sacrifices to the altar in every part of the land.

TWO-THIRDS OF THE DOCTORS drift away from companionship with their medical brethren after leaving medical school, and tend to live more or less by themselves or in the society of their families or lay friends, according to a doctor who has had

the profession under his eye for twenty years. Dr. M. A. Blankenhorn, retiring professor of Clinical Medicine at Western Reserve University, thinks such men are losing something that is really vital to their work. The cry today is for postgraduate education, and some think of it as a return to school and to study, but the latest medical discoveries and practices are brought to the doctor's attention and discussion in the medical meetings that are continually available to him. Who can say how much of a doctor's knowledge was hammered into his mind by those hours of earnest discussion, debate, and perhaps dispute, with his fellow students in the medical college? The same process is now to be had in the discussions in the medical meetings. Never mind the modesty, timidity, jealousy, intolerance or indolence that impels one to stay at home. Medical companionship, he says, "is a fine art," and it is worth cultivating!

Books

RECEIVED

(Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.)

Diet Control. By George E. Anderson, M.D. & Paul C. Eschweiler, M.D. Octavo. New York, Gallo & Ackerman, Inc., 1935. Cloth, \$3.50.

Aids to Ophthalmology. By N. Bishop Harman, M.A. Eighth edition. 16mo of 242 pages, illustrated. Baltimore, William Wood & Company, 1935. Cloth, \$1.25.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 2, 45th series, 1935. Edited by Louis Hamman,

M.D. Octavo of 327 pages, illustrated. Philadelphia, J. B. Lippincott Company, 1935. Cloth, \$3.00.

The International Medical Annual. A Year Book of Treatment and Practitioner's Index. Edited by H. Letheby Tidy, M.D. & A. Rendle Short, M.D. Octavo of 522 pages, illustrated. Baltimore, William Wood & Company, 1935. Cloth, \$6.00.

The Brain as an Organ. Its Postmortem study and Interpretation. By Frederic Wertham, M.D. & Florence Wertham. Octavo of 538 pages, illustrated. New York, The Macmillan Company, 1934. Cloth, \$7.50.

REVIEWED

Poliomyelitis. By John F. Landon, M.D., and Lawrence W. Smith, M.D. Octavo of 275 pages, illustrated. New York, The Macmillan Company, 1934. Cloth, \$3.00.

In this short volume the authors aim to present a well rounded and compact exposition of poliomyelitis. The contents are arranged in thirteen chapters and four appendices, the latter being intended largely for the use of those engaged in the institutional care of poliomyelitis. The introduction, history of the disease, etiology and pathogenesis occupy the first and second

chapters. The third chapter is devoted to pathology and is quite detailed. The personal experience of the authors in the examination of material from the recent outbreak of 1931, makes it particularly interesting.

The subject matter included in the chapter on Epidemiology brings this aspect of the subject quite abreast of modern knowledge. The chapter on Nomenclature and Classification briefly reviews the classifications proposed for the disease and the authors present one of their own.

The symptomatology and paralysis are considered in two short chapters occupying only about 26 pages which seem entirely too brief for a book which is written for the practicing physician and medical student. In the reviewer's opinion, entirely too little space has been given to this aspect and especially to the finer points in the pre-paralytic stage. The latter consideration is of great importance to the early recognition of the disease.

The chapters on diagnosis and laboratory aids survey these fields in a brief, practical manner. Illustrative cases are often too briefly presented to obtain their full value.

The treatment of the disease is presented in an interesting style and the various modern methods of therapy are referred to and often commented on. Serum therapy is treated at length and mention is made of the anti-polio-myelitic horse serum and of the dangerous and even fatal reactions following its use. One is again impressed with the necessity of caution in the distribution and use of new serums or vaccines until experimental study has established their reasonable safety when used in a prescribed manner. One is also startled to hear of the proposal and use of cisternal puncture in poliomyelitis patients. It is a relief to know that the authors consider the latter measure contra-indicated and the anti-polio-myelitic horse serum too dangerous to use. In comparison with the latter serum, convalescent serum is a harmless remedy certainly by the intramuscular route. The intraspinal injection, however, of this human serum is accompanied by severe reactions which make it hazardous notably in patients with bulbar symptoms.

Chapter thirteen on "After Care of Paralysis" is well presented, the opinions expressed are sound, logical and well balanced. Measures of physiotherapy might perhaps receive a somewhat more important place than that given to them.

JOSEPH C. REGAN

The Autonomic Nervous System. By Albert Kuntz, M.D. Second edition. Octavo of 697 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$7.50.

This work of which this is the second edition, is a classic in its field. It is the reference book, *sine qua non*, in the study of the autonomic nervous system. In the analysis of problems relative to the autonomic nervous system, requiring a perusal of the related literature, a careful survey always begins with and sometimes ends with this particular book. There is a vast amount of literature being produced on this subject, so huge indeed, that without a work of this

type in which the essentials are carefully sifted the uninitiated would soon be foundering. Its 125 pages devoted solely to references to the literature bear witness to the patience, care, and zeal of the author.

The general plan of the first volume has been followed in this edition. So many changes have taken place, particularly in the treatment of disease and in clinical investigation that the book has been really written anew. We find a thorough consideration of the anatomy and physiology, the relationship to individual organs or tissues, the action of the autonomic nervous system in disease, its bearing on referred pain, and finally the present surgical considerations.

It is so detailed, so accurate, and so thoroughly complete that the connotation of "A Bible on Autonomic Nervous Disease" would be fitting. It is so generally accepted as an authoritative reference work, that the reviewer in indorsing it, is following the crowd.

HAROLD R. MERWARTH

Tuberculosis in the Child and the Adult. By Francis M. Pottenger, M.D. Octavo of 611 pages, illustrated. St. Louis, C. V. Mosby Company, 1934. Cloth, \$8.50.

This new work by a most able authority with vast experience in his field offers to the physician and student a clear insight into many of the problems encountered in pulmonary tuberculosis. It is well written and illustrated with many case reports and x-ray pictures. The chapter on visceral neurology in pulmonary tuberculosis is excellent as are the chapters dealing with therapy. There is some vagueness in the chapters dealing with infection and immunity, but on the whole it is a worthy addition to the works on pulmonary tuberculosis.

CHARLES E. HAMILTON

Aids to Osteology. By Philip Turner, F.R.C.S. Third edition. 16mo. of 222 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.50.

This book is a pocket-size edition containing 222 pages of names and concise descriptions in osteology, with a complete index. In this new edition the author employs an approved English terminology, a desirable feature which one may find very helpful to eliminate confusion and hardship in memorizing when written in Latin. Although a small book, it is comprehensive and will prove most valuable to the student for study and review of osteology, and to the practitioner and surgeon in refreshing his knowledge of the regional bony anatomy.

JACOB S. BEILLY

INDUSTRIAL DERMATOSES**Causes, Prevention, and Treatment**

JOSEPH J. ELLER, M.D., *New York City*, and
LOUIS SCHWARTZ, M.D., *U. S. Public Health Service, New York City*

Industrial dermatoses constitute 60 per cent of the industrial diseases, not including actual accidents. The figures gathered from the states of Ohio, Missouri, Connecticut, New York, Massachusetts and Wisconsin show that among 15,050 industrial diseases recorded in these states over a period of years, 9,628 were dermatoses. In these states there was an average of 2,944 cases of occupational dermatitis yearly. By comparing the population of the above states with that of all the states we can safely estimate that there occurs yearly in the United States at least 12,000 cases of occupational dermatitis of sufficient severity to be reported. (See Table I.)

In 1934 New York State alone had 1,012 cases of occupational diseases, with 689 cases of compensated dermatoses. These dermatoses were largely made up of dermatitis venenata and dermatitis eczematosa. Included were a few cases of glanders, tuberculosis, anthrax, actinomycosis, sporotrichosis, erysipeloid, keratoses, cancers, calluses, burns, and abrasions.

Employees with milder dermatoses or afraid of losing their positions because of their hypersensitivity to the materials with which they worked, or because of prospective financial loss while being carried as compensation cases, often continued at their occupations. On the other hand, a larger number claimed compensation for trivial or unconnected dermatoses when fear of a lay off or earnings less than compensation rates seemed imminent. This last group includes some

malingeringers who actually produce dermatoses or who manage to prolong and maintain them in a variety of ways.

From the examination of many thousands of workers in various industries we can safely say that more than one per cent of the workers engaged in basic industries suffer some time during the year with an occupational dermatitis. These cases in general do not go to free clinics, but to private physicians. In a study of the number of trade dermatitis consultations in a published bulletin of a New York Hospital for the years from 1928 to 1933 inclusive, we find only 138 in over 600,000 consultations, i.e., less than one in every five to six thousand. We do not question that a much larger number were seen and catalogued as dermatitis venenata or eczemas. Certainly in clinic work a segregation of these cases with their special problems is indicated. We must agree with C. Guy Lane¹ that a more accurate and generally accepted classification of these diseases would be of great aid in their study. Over 10% of the cases of dermatitis venenata and eczema upon better analysis and classification would be occupational in origin. It must be realized that a large percentage of dermatitis cases found in industrial workers is due to the worker's contacts outside of his occupation.²

Causes

We must still be uncertain as to the part played by variations in pigmentation and age in the matter of predisposition.

Read at the Annual Meeting of the American Dermatological Association, White Sulphur Springs, Pa., May 1935

Blondes, the relatively young, and the aged are perhaps more susceptible to skin irritants. Unusually dry or moist skins are certainly predisposing factors. Thick and oily skins are undoubtedly more resistant.

Diseased and abnormal skins are more susceptible. Seborrhea, ichthyosis, pyogenic infections both focal and local, and individuals with skin injured from any cause offer less resistance to a skin irritant. A history of recurrent skin eruptions is always an indication of the possibility of skin sensitivity which increases chances of dermatitis. After sensitivity develops to one agent, the worker tends to be more sensitive to other substances.³

Fungus infections in their wide prevalence force us to consider their effect. They rank first in the group of other causes discussed above as injuring the skin. Secondly, with their induction of "phytids" they set up a sensitizing mechanism with a tendency to become polyvalent.⁴

Heavy metal poisoning (lead, arsenic, nickel, etc.) may possibly act as a predisposing agency, but this hypothesis is as yet unproven. Spectroscopic and other forms of skin analysis show varying metal contents in the skin of patients with dermatoses, but the same is frequently true in the majority of normal individuals and in those with other dermatoses.

Finally, the rough, ignorant, careless and slovenly person with poor hygiene, who does not keep his skin clean, and who is careless about clean clothes, is a menace to himself by providing the element of increased exposure, both temporal and quantitative, to the multitude of irritants about him. The individual with hay fever, asthma, and other manifestations of non-cutaneous allergy does not appear to be predisposed to occupational dermatitis according to our own observations.

The chief causes of industrial dermatitis differ in various localities according to the prevailing types of industry. In rural communities plant poisonings are prevalent. In Missouri, out of over 1,020 cases of industrial dermatitis, 69 per cent were due to lime and cement; 15 per cent due to poison ivy; 9 per cent to caustics and acids; 6 per cent to lye and 2 per cent to petroleum products. In Califor-

nia, the fruit business is the most important. In New York State (1933), of 489 cases of occupational dermatitis, 50 per cent were due to plants, 12 per cent to soaps and washing powders, 6 per cent to dyes, 3 per cent to turpentine, and 2 per cent to petroleum products, the remaining cases being due to a wide variety of causes. In 1934, New York State had 1,012 occupational disease claims disposed of, in which process 439 were allowed and 573 were disallowed. Table II shows the reasons for disallowance in 56.4 per cent of the cases of occupational poisoning and disease.

Table III by the Division of Industrial Hygiene from the New York State Department of Labor is instructive.

It can be safely stated that in general the majority of industrial skin diseases in the United States is caused by the

TABLE I.—REPORTED FREQUENCY OF OCCURRENCE

State	Year	Occupational Diseases	Dermatoses
California	.....1933	1,528	1,156
Connecticut	.....1933	557	388
Massachusetts	...1932	954	613
Minnesota	.....1932	673	497
Missouri	.....Average 3 years	1,800	1,000
New Jersey	.....1933	468	352
New York	.....1934	1,012	689
Ohio	.....1934	1,582	902
Wisconsin	.....Average 3 years	301	190
Total	.....	8,875	5,787

About 65% of occupational diseases are dermatoses. Annual occurrence in United States of occupational dermatoses losing time from work estimated at 20,000 cases.

Studies of United States Public Health Service show that more than 1% of workers are affected with occupational dermatoses.

Average compensated case loses 10 weeks from work.

Average compensation\$100.00

Average cost of medical care..... 90.00

Annual loss from occupational dermatoses estimated at\$4,000,000.00

TABLE II.—DISALLOWED CASES, BY CAUSE, 1934

Reason for Disallowance	Up-State	New York City area	Total No.	Per cent
Not covered by act.....	15	87	102	17.8
No proof of causal relation.....	7	7	14	2.4
No medical evidence.....	9	50	59	10.4
Not an occupational disease.....	16	7	23	4.0
No proof of disease.....	4	1	5	.9
Not contracted within 1 year.....	..	1	1	.2
Disability less than 7 days.....	159	22	181	31.0
No disability.....	34	49	83	14.5
No appearance of claimant.....	41	44	85	14.8
No claim filed.....	3	6	9	1.6
No notice in time.....	1	2	3	.5
Claim abandoned.....	..	1	1	.2
No jurisdiction.....	1	1	2	.3
Grounds not recorded.....	3	2	5	.8
Total	293	280	573	100.0

TABLE III—DERMATITIS BY CAUSE, 1934 ALLOWED AND DISALLOWED CASES

Cause	Up State			N Y C			Total		
	All	Dis	Total	All	Dis	Total	All	Dis	Total
Acetic acid				2	1	3	2	1	3
Acid unknown	1	3	4	1	1	2	2	4	6
Alkali	4	11	15	1	2	3	5	13	18
Aluminum silicate					1	1		1	1
Amidobenz				14	6	20	14	6	20
Aminonia		2	2	6		6	6	2	8
Anilin	2	1	3	19	5	24	21	6	27
Arsenic				3		3	3		3
Benzene				3		3	3		3
Benzine	1		1				1		1
Butane	2		2	3		3	5		5
Chemical unknown	5	7	12	7	1	8	12	1	19
Chrome	3		3		2	2	3	2	5
Citric acid	7	10	17	7	1	8	14	11	25
Color	1		1		1	1		1	1
Creosote	1		1				1		1
Dermatitis unknown	2	7	9	1	3	4	3	10	13
Dermatitis NS		22	22	1	64	65	1	86	87
Dust unsp		1	1					1	1
Dye cloth		3	3					3	3
Dye fur				5	14	19	5	14	19
Dye leather	3		3				3		3
Dye silk				1	1	2	1	1	2
Dye unsp	2	3	5		2	2	2	5	7
Ethylene glycol	1		1				1		1
Flour		2	2	1	1	2	1	3	4
Formalin		1	1					1	1
Friction				3	3	6	3	3	6
Fruit				1	1	2	1	1	2
Fur	1		1		1	1	1	1	2
Gasoline	5	7	12	7	2	9	12	9	21
Glycerine		1	1					1	1
Glucose				2	2	4	2	2	4
Gold				1		1	1		1
Graphite	1		1				1		1
Ink	1		1	1		1	1		1
Kerosene		1	1					1	1
Lacquer	2	2	4		2	2	2	4	6
Lead point	3	3	6		1	1	3	4	7
Leather dust	1		1	1	1	2	1	1	2
Mercury		1	1					1	1
Metaphenylaminophenol		1	1		2	2		3	3
Methyl Alcohol	1	1	2	1		1	2	1	3
Naphthalene				3	3	6	3	3	6
Nickel		1	1	2	1	3	2	2	4
Nitrocellulose solvent					1	1		1	1
Oil unsp	3	3	6	4	2	6	7	5	12
Oil essential				1		1	1		1
Oil machine	2	6	8	2	6	8	4	12	16
Oil mineral				6	3	9	6	3	9
Oil vegetable	1		1	2	1	3	3	1	4
Oxalic acid		1	1	3		3	3	1	4
Paint		2	2					2	2
Paraffin				1		1	1		1
Petroleum	1		1		2	3	1	2	3
Phenol		3	3	3		3	4	5	9
Plaster	11	27	38		2	2	11	33	44
Plum		1	1	2	1	3	2	2	4
Pyrex								1	1
Rubber	1		1				1		1
Salt	3		3				3		3
Soap	1	3	4				1	4	5
Sodium carb	3	5	8	37	17	54	40	22	62
Sodium chloride	2	2	4	3	3	6	5	5	10
Sodium cyanide	1	1	2		3	3	1	4	5
Sodium hydroxide					1	1		1	1
Sodium nitrite	3	3	6	10	6	16	13	9	22
Sodium silicate		1	1					1	1
Starch		2	2					2	2
Sugar	1		1				1		1
Sulphur					1	1		1	1
Sulphur dioxide		1	1					1	1
Sulphuric acid				3	1	4	3		3
Thinner									
Toluol		1	1					1	1
Trauma		1	1					1	1
Trisodium phosphate				1	1	2	1	1	2
Turpentine	1	1	2	1	2	3	2	3	5
Varnish	2	1	3	2	1	3	4	2	6
Vegetable	1		1				1		1
Wood dust	3	3	6				3	3	6
Zinc	2	2	4				2	2	4
		1	1					1	1
Totals	93	164	257	180	189	369	273	353	626



Fig. 1. Erysipeloid infection caused by the bacillus of swine erysipelas in a meat handler. Case of Dr. J. V. Klauder.

TABLE IV.—GENERAL IRRITANTS
Chemical

<i>Inorganic</i>	
Acids and salts	Sulphuric
	Nitric
	Hydrochloric
	Hydrofluoric
	Chromic
	Arsenious
Alkalis.....	Phosphoric
	Sodium Hydrate and Carbonate
	Potassium
	Ammonium " " "
	Barium " " "
Salts of irritant minerals	Calcium " " "
	Mercury
	Chromium
	Nickel
	Silver
	Zinc
<i>Organic</i>	
Acids and salts and anhydrides.....	Arsenic
	Antimony
	Phosphorus
	Oxalic
	Carbolic
	Cresylic
	Formic
	Lactic
	Acetic
	Maleic
Solvents.....	Hydrocyanic
	Phthalic
	Abietic
	Turpentine
	Benzol
	Carbon bisulphide
	Carbon tetrachloride
	Trichlorethylene
	Tetrachlormethane

action of acids, alkalis, caustics, oils, greases, solvents, and plants. It is possible to classify the causes in a simple way as follows:

- 1. *Physical Agents:* burns, scalds, extreme cold, radiations of ultraviolet light, heat, Roentgen rays and trauma.
- 2. *General Irritants:* (See Table IV.) These are agents which will irritate any skin. A direct, predictable, toxic effect is possible with these chemicals. The inorganic

TABLE V.—SPECIFIC IRRITANTS
Cause Dermatitis Only in Hypersensitive Individuals

Rubber and rubber compounds.....	Wild rubber
	Hexamethylenetetramine
	Gum resins
	Allyl sulphide
Dye intermediates..	Triphenylamine
	Anilin and compounds
	Nitro compounds
	Nitroso compounds
	Di nitro chlor benzol
	Naphthalene and compounds
Explosives.....	Anthracene " "
	Benzidine " "
	Benzanthrone " "
	Toluidine " "
Rosin, synthetic resins and waxes.	Trinitrotoluene
	Tetra nitro methylaniline
	Fulminate of mercury
	Trinitroresorcin
Cosmetics.....	Sensol (C ₂ H ₅ N ₁₀)
	Rosin
	Wood rosin
	Burgundy pitch
	Dammar
	Phenol formaldehyde resins
Photo developers...	Urea
	Trichloronaphthalene (Halowax)
	Chlorinated waxes
	Beeswax
Leather dyes.....	Paraffin
	Containing irritant dyes, oils, perfumes and other chemicals.
Fur dyes.....	Paraphenylene diamine
	Paramidophenol and compounds
	Hydroquinone
	Metol (sulphate of monomethyl paramidophenol)
Fabric dyes.....	Pyrogallol
	Nigrosine
	Bismarck brown
	Paraphenylendiamine
Insecticides and fungicides.....	Paramidophenol
	Anilin black
	Crystal violet
	Malachite green
Soaps.....	Auramine
	Chrysoidin
	Metanil yellow
	Chrome mordanted dyes
Oils, vegetable and mineral.....	Mercury compounds
	Arsenic
	Fluoride
	Nicotine
	Pyrethrum
	Those containing free alkali
	" " olive oil " foots "
	" " coconut oils
	Medicated
	Perfumed
	Essential oils
	Sulphonated oils
	Cutting oils
	Coning oils
	Petroleum distillates

The action on the skin of these various causes may be classified as follows:

1. *Keratin and Fat Solvents*, such as mild alkalis, soaps, turpentine and vegetable oils.

2. *Desiccators*, or hygroscopic agents, which take the water out of the skin, such as sulphuric acid and powerful alkalis.

3. *Protein Precipitants*, which form albuminates in combining with the skin. Heavy metal salts act in this manner.

4. *Oxidizers*, such as chlorine gas, peroxide of hydrogen, chromic acid and its salts.

5. *There is a group which tends to hydrolize* when coming in contact with the moisture of the skin, thus forming irritating compounds. Hexamethylenetetramine, for example, on hydrolizing forms formaldehyde and formic acid.

6. *Certain substances act as stimulants or irritants to the keratin forming cells of the skin* and are apt to cause new growth. Arsenic, petroleum products and anilin are substances of this kind.

7. *Then there is another group which is composed of sensitizers*. The nitro and the nitroso compounds act in this manner. The group is a very large one.

While it is certainly true that many cases of dermatitis develop only after years of exposure, most cases occur promptly in new workers or in employees exposed to new sensitizers. There is a definite epidemiology which appears in the exposure of individuals to a new irritant. Where to draw the line between irritants and sensitizers is often very difficult in classification. Dinitro-chlorobenzol in strong solution will irritate any skin. Individuals who become sensitized to it in some cases cannot enter a building in which it is in use without developing a facial erythema.⁵ However, a $\frac{1}{2}$ to 1 per cent solution may be used of this same chemical to patch test normal individuals who will show a negative test after 24 hours.

A demonstration of a strongly sensitizing varnish occurred in an outbreak of dermatitis among nineteen out of thirty-two exposed employees in two cotton mills. The latent period was from three days to four weeks of contact before the dermatitis appeared. The more severe cases appeared earlier. Twelve out of thirteen cases who developed a dermatitis were examined and had positive patch tests for the varnish. Five non-exposed individuals had negative patch tests. Re-

covery in these patients took from a few days to thirteen weeks.⁶

One point not generally considered is the apparent immunity which develops in workers after first being sensitive to materials they employ. It seems that this occurs in those who develop a mild dermatitis only. The workers themselves say that they "become hardened" to the agent. Unfortunately, this immunity lasts only from one week to a month, and on the resumption of work, the "immunizing" process must be repeated.

There is another kind of worker who works for many years without any trouble and then for some unknown reason becomes sensitized and develops a dermatitis from the materials which he previously handled with safety. Immunity does not develop in this type of sensitivity. They tend to develop hypersensitivity to other substances, and present a very difficult problem.

Symptoms and Course

When the average patient is first affected with itching and burning and the visible signs of an occupational dermatitis, and he presents himself for examination, his clinical appearance, excepting in a few cases, does not offer a clue to the irritant. Of course, burns by strong acids and caustics can be readily distinguished, and the primary action of fat solvents which cause the skin to become dry, and the dehydrators which give the skin a scaly, parchment-life appearance, can also be recognized. But it can be said that occupational dermatitis in its acute form is a dermatitis venenata and does not have an appearance which characterizes the specific irritant. It can be stated that erythema, edema, papules and vesicles of the exposed parts are characteristic of dermatitis due to external irritants. By the exposed parts, the parts exposed to the eye are not always meant, because the covered parts of the body may also be exposed to the action of penetrating dusts, fumes and liquids. When dust is the irritant, it is well to remember that the belt line, the ankle, and areas exposed to friction are often involved, especially the back of the neck. Table VIII attempts a simple outline of clinical types.

It is characteristic of a typical case of occupational dermatitis that it appears a

short time after the person is exposed to the offending material and that it tends to disappear after exposure has ceased; that is, it will get well if the person stops work for a length of time. It even becomes improved during the week-end holiday. It will reappear upon exposure to the irritant. We think that the best proof that a dermatitis from which the person is suffering is due to his occupation is that it appears when the man goes to work, gets well when the man stops work, and reappears when he goes back to work. This, of course, is the usual picture, but it is not always encountered. Some workers have alternating remissions and exacerbations while at work. These cases are difficult to explain. It may be possible that the conditions under which they work are not always the same. The dermatitis itself may exhibit a periodicity due to variations in the resistance of the persons or variations in his sensitivity. Focal infections and diet may be contributing factors. There is still another group of cases in which the primary dermatitis is followed by frequent relapses and finally by a chronic eczema, even after giving up employment. Infections with pus organisms and molds may also occur on top of occupational dermatoses and complicate the picture of the disease. It is very often difficult in such cases to prove that the occupation and not the complication was the original disease.

Diagnosis

The differential diagnosis from skin diseases due to other causes may be most

difficult. Rhus dermatitis and other simple conditions are continually confused with occupational dermatoses. The effects of irritating salves may mask the true picture. A detailed and pertinent history is important. In a recent report of a hundred cases presenting themselves for compensation only 18 were found in which the occupation was the proven cause.⁷ In 42 cases of this group dermatophytosis was the diagnosis. The others had a wide variety of dermatoses.

Industrial dermatitis itself cannot be differentiated by its appearance from other venenata or contact eczemas caused



Fig. 3 A "dust dermatitis" due to a synthetic intermediate dye occurring in a worker in drying ovens.

by like noxae in the patient's home and from outside sources.

In the matter of dermatophytids in the present state of our knowledge, inspection alone cannot always be relied on to differentiate them from eczemas of the contact type.⁸ Mycological examination of the suspected primary focus and of the "phytids" and culturing of material is usually necessary. Trichophyton and oidium mycin intracutaneous tests may aid in diagnosis. Patch tests should be done, but finally a personal evaluation of each case is necessary. The fungus infection often coexists with the dermatitis. One predisposes the individual to the other and vice versa. Over three times as many fungus infections in employees of a hat factory were found in those engaged in wet processes as in those working at dry

TABLE VIII.—CLINICAL TYPES

Acute dermatitis venenata or eczematosa . . .	characterized by erythema, edema, papules, vesicles, exudation, crusts, and finally desquamation—usually the result of general and specific irritants.
Chronic fissured Eczemas	characterized by erythema, lichenification, cornification, fissuring—usually the result of dehydrators, fat solvents, soaps and detergents.
Folliculitis and acne	characterized by plugged sebaceous follicles and suppurative lesions—usually caused by oils, waxes and chlorine.
Epidermal proliferation, . . . (Benign and malignant)	characterized by keratosis, papillomata and epitheliomata of exposed parts—usually caused by petroleum, coal tar and derivatives, arsenic and anilin.

processes." Certain industrial conditions undoubtedly tend to influence the number and severity of fungus infections.

The patch test in contact dermatoses may be of diagnostic importance but cannot always be relied upon. It is much superior to the intradermal and scratch tests in this field. The individual's reaction to an irritant by the patch test varies with the degree of sensitization, the strength of the concentration, the actual quantity of the substance applied to a given area of skin, and the duration of the application. Needless to say, care must be exercised in the application of tests. A concentrated general irritant will give positive patch tests on all skins, and on a sensitized individual it will cause actual necrosis. With an unknown or new irritant a question as to whether fellow workers can handle the material with impunity may help one decide whether to patch test without diluting. Dry substances should be moistened with water. Table IX shows Rudolph Mayer's list of substances and concentrations which on healthy, normal skins cause no reaction in twenty-four hours by patch test.

Another list of irritants which can be used follows:

Di nitro chlor benzol.....0.5% alcoholic solution
Amino azo toluene.....2% alcoholic solution
Beta naphthol.....20% in olive oil
Di ortho tolyl guanidine.....Pure powder
Di ortho tolyl thiourea.....Ditto
Mono benzyl para amino phenol.....Pure
Meta toluyluene diamine.....Ditto
Michler's Hydrol.....5% alcoholic solution
Naphthylamine.....2% alcoholic solution
Nitroso di ethyl anilin...1% alcoholic solution
Phenyl alpha naphthylamine.....Pure
Platamine black.....Solid powder
Para nitro benzoic acid.....Pure
Phenylglycine.....Ditto
Tetra methyl thiuram mono sulphide.....Ditto
Tetra methyl thiuram di sulphide.....Ditto

A much larger list of this sort will be reported during the present year. Although the patch test may be negative at the end of twenty-four hours, any erythema or other process developing at the site in the next few days still makes the test positive and indicates hypersensitivity.

The failures of the patch test and the sources of false positives or negatives must be always considered. Controls are of value because the purity of the irritant used for testing may be in doubt and one

TABLE IX.—PATCH TEST MATERIALS AND CONCENTRATIONS WHICH SHOULD GIVE NO REACTIONS IN NORMAL INDIVIDUALS AFTER 24 HOURS

Rudolph Mayer

Wearing Material

Feathers, fur, animal hair, plants, typewriter ribbon, leather-small pieces 1.5 by 1.5 cm., slightly moistened.

Materials Used in Arts

Urea, ammonium sulphate, potassium nitrate, sodium nitrate, all in 10% solution.

Materials Used in Washing

Persil, washing soda, sidol, sodium hypochlorite, calcium chloride, all in 10% solution.

Acids

Hydrochloric acid 1%, sulphuric acid 0.5%, nitric acid 0.2%, boric acid, pure or moistened, sulphurous acid, 0.2%, chromic acid 5/10 of 1%, formic acid 1%, acetic acid 3%, benzoic acid 1% in alcohol solution, sodium hydrate 5/10 of 1%, Soda, Na_2CO_3 , 10% solution in water, ammonia 1%, borax-saturated solution.

Woods

Pine, oak, hemlock, teak, satin, ebony, powdered and moistened.

Bleaching Powder

Pure and moistened.

Aromatic Oils All in 1% Alcoholic Solution

Citron, peppermint, bergamot, etc.

Alkaloids and Similar Substances

1% watery solution.

Resorcin

1% watery solution.

Soaps

Hard soaps and soft soaps—small moistened piece.
Benzene, 60% in olive oil.
Benzol, 60% in olive oil.
Toluol, 50% in olive oil. Xylol, 50% in olive oil.
Carbon bisulphide, 1/2 of 1% in olive oil.
Trichloroethylene, 50% in olive oil. Mineral oil, 60% in olive oil. Petroleum, 20% in olive oil.
Tar, asphalt, pitch, pure and painted on the skin without adhesive.
Turpentine, 50% in olive oil.
Esters, such as amyl acetate and butyl acetate, pure.
Acetone, pure. Alcohol, pure.

Colors and Color Bases

Shoe and leather colors, 50% in olive oil. Complete oil colors in tubes should be used pure. Other oil colors, 50% in olive oil. Water colors, pure. Mineral colors, pure. Printer's inks and colors, 60% in olive oil.
Anilin, 2% in olive oil or vaseline. Anilin, methylanilin, dimethylanilin and nitrobenzol, 10% in olive oil.
Diazonium salts, 1% in vaseline. (Diazonium salts are used in the preparation of azo-colors.)
Ursol, amidophenol and their homologues, 2% solution in vaseline.

Photographic developers, 5% watery solution.

Reagents

Methylorange, phenolphthalin, 2% alcoholic solution.
Esbach's reagent, Nylander's reagent, sulphosalicylic acid, 10% watery solution.

Disinfectants

Bichloride of mercury and mercury oxycyanate, 1% watery solution.
Formalin, 10% watery solution.
Carbolic acid, 2% solution.
Liquor cresolin 1/2 of 1% solution.
Naphthalin, pure.

Miscellaneous Salts

Sulphur nitrate, 3% watery solution.
Copper sulphate, 10%. Nickel sulphate, 10%. Iron sulphate, 10%. Potassium bichromate, 1/2 of 1% watery solution. Potassium permanganate, 10% watery solution. Calcium nitrate, 10%. Ammonium chloride, 3%. Ammonium nitrate, 10%. Ammonium fluoride, 1/2 of 1%. Sodium fluoride, 1/2 of 1%. Sodium sulphide, 2%. Common salt, 10%. Potassium chloride, 10%.



Fig. 4. Positive patch test with 0.6% solution of dinitrochlorbenzol.

may get false positives with benign concentrations due to impurities. When we are ignorant of the strength of the irritant, controls are necessary. We must always bear in mind the fact that hypersensitivity may be localized. In general, clear areas of the skin near the site of the eruption are the best for testing. Sulzberger and Kerr¹¹ cite a patient whose contact dermatitis was due to face powder and had a positive patch test on the V area of the neck and chest anteriorly while a patch test on the back was negative.

The patch test may again be negative because it does not represent or simulate actual working conditions. Friction may be necessary to produce the dermatitis. Also, there may be sensitivity to an irritant which will not appear by patch test for reasons which cannot be explained. Sometimes heat, or ultra-violet radiation must coexist. It seems that chlorophyll dermatitis is produced with red ray irradiation plus chlorophyll.¹² Photodynamic activity is important in oil of bergamot dermatoses and melanoses due to coal tar and petroleum derivations.¹³ The above being so, we can only submit more strongly than ever to the feeling that the most practical and important test is that of exposing the man to actual working conditions. If every time the man works, he develops dermatitis, and every time he stops, he gets well, his job is certainly a causative factor of his condition. The following are a few cases in point illustrating various types of industrial dermatitis.

CASE 1. Mr. P. B., an Italian, aged 48,

was a cement mixer and brick layer's helper. His dermatitis was on the face, neck, hands, forearms and legs, and had been present for two months. Patch tests, whenever applied with cement and other materials that he worked with, were negative. On inhaling the dust from cement and exposing himself to it, a dermatitis could be produced. A direct rubbing of the cement on the previously affected areas produced a dermatitis.

This case illustrates local sensitivity and secondly shows how friction and a better simulation of occupational conditions were necessary to produce a positive test, and shows the failure of the patch test due to two factors.

CASE 2. Miss B. G., aged 27, was a manicurist employed as such for many years. She presented a dermatitis of the palms and fingers, of four weeks' duration. Patch tests which were done on the back with lemon shampoo, permanent wave lotion, and nail polish remover, exhibited positive reactions at the end of twenty-four hours. The patient discontinued her work, and with emollient applications to the affected areas, the eruption disappeared within three weeks. Upon returning to her usual occupation, there was a prompt recurrence.

This case illustrates the not unusual presence of multiple sensitivity to irritants.

CASE 3. Mrs. B. D., a woman aged 29, a stenographer, presented an eruption on the backs of both hands. Nine months previously she had had a similar eruption which disappeared with treatment. The present outbreak was of one week's duration. Patch tests on the back, with carbon and typewriter ribbon were positive. Treatment with roentgen rays and emollient pastes, together with the discontinuance of her occupation resulted in a clear skin in six weeks.

The repeated attacks with confirmatory diagnosis by means of positive patch tests are of interest in this case.

CASE 4. J. M., a dishwasher in a restaurant, used homemade soaps. He is an example of localized sensitivity proven by positive patch tests on the forearms, hands, and sites near the affected areas (hands and forearms). These tests were negative on the back.

CASE 5. Mr. A. G., aged 27, was employed as a soda fountain clerk, and was exposed to silver polish, scouring powders and soaps. The fingers of both hands (six in all) exhibited paronychia and onychomycosis. A microscopic examination and a culture revealed a *Monilia* infection. Patch tests for his occupational contacts were negative.

Nevertheless, this man's condition should be considered of occupational origin.

We have seen several similar conditions in those exposed to wet and irritating solutions. We believe such conditions predispose strongly to fungus infections. Undoubtedly abrasions and traumatism contribute as predisposing factors. By discontinuing his occupation and with local therapy there was an early regression of his skin condition.

CASE 6. Mr. Z. P., aged 49, was a furrier. This is a case of localized sensitivity to fur and fur dyes. The duration of the skin eruption on both hands was three years. The eruption disappeared while the patient was away from his occupation and promptly reappeared when he returned to it. Patch tests on his back were negative, but were positive locally.

This man's history of recurrence during his occupation is the most positive test of occupational dermatitis.

CASE 7. Mrs. A. M., aged 25, though not an industrial dermatitis case, is nevertheless of interest as a contact dermatitis case secondarily infected with fungus. The patient exhibited the dermatitis in the area where she wore a wrist watch. The test with a leather strap proved to be positive. Her feet exhibited a fungus infection, as did also the area of the dermatitis by culture. Since seeing this case, we have also seen a similar dermatitis in a man who wore a wrist watch which was not complicated by a fungus infection. Up to date there have been thirty or forty similar cases throughout New England.

Tracing the materials used in the manufacture of these watch straps entailed a vast amount of work with as yet an incomplete analysis. The watch maker, the strap manufacturer, the leather jobber, the lacquer company, and the tannery involved, all had to be canvassed and samples of their products involved in the manufacture of the straps had to be collected and used for patch testing. A tour of Lynn, Meriden, New Haven, New York and Philadelphia was necessary for this. The thinner, among the substances involved, seems at the present writing to be incriminated as the offending substance.

Treatment

A person who is sensitive to the material with which he works and cannot develop an immunity or "become hardened" to it should seek some other occupation.

The dermatitis, if uncomplicated, should disappear when a worker is away from the substance which has caused it. It is rarely that cases of chronic, incurable eczema can be positively traced to an industrial irritant. Most cases of industrial dermatitis develop in new employees or employees exposed to a new irritant, and are usually mild in character. Such workers should not be taken off the job. It is much better to give them a protective ointment to put over the parts, protective clothing, and to let them continue working. In general, workers who do not develop an immunity should be taken off the job and placed in some other occupation, if possible. In applying medication to the lesions of an occupational dermatitis, only the mildest form of ointments, lotions, or powders should be used. A mild boric acid ointment or a calamine lotion with perhaps a weak solution of an anti-pruritic, such as phenol, have been found to be efficacious. When the diagnosis is known in selected cases, the use of the Roentgen rays in fractional, non-filtered doses often speeds the convalescence. The coexistence of fungus and pus infections necessitates measures to treat the dual or complicating disease at the same time. Attention similarly must be turned to constitutional factors. The elimination of a focus of infection is sometimes followed by a clearing up of a persistent occupational eczema.

In certain cases desensitization of the patient may be tried. The procedure may be difficult and prolonged, and the results uncertain. However, the literature cites many successful instances.^{10,14,15} The vegetable oil contact dermatoses seem to provide the most promising results. The "Allergenic Oils" (Lederle) may be useful both in treatment and desensitization.

Prevention

The ideal method of prevention is to safe-guard the industries which have skin hazards so that the injurious chemicals will not come in contact with the skin of the worker. This can be and has been accomplished in many factories where the entire process of manufacture is totally enclosed. The raw materials are sucked up into reservoirs from which they flow into retorts and tanks merely by the turning of a valve. The finished product

is barreled without the worker having come in contact with any of the intermediates of the manufacturing process. Modern factories are being built to conform, in so far as possible, with this standard. In some places the worker must be protected against irritating substances by wearing suitable protective clothing such as rubber gloves, aprons, masks, goggles,—and by the application of protective ointments.¹⁶ The actual elimination of unessential, strongly eczematogenous chemicals is being carried out. For example, hexamethylenetetramine in the rubber industry has been largely discontinued as too much of a hazard. The examination of new workers for possible evidence of predisposition (referred to above in this article) would be of some value in industries and processes in which the dermatitis hazard is high. In factories where synthetic dyes and complex organic compounds are manufactured, new applicants should be patch tested with the chemicals with which they will be called upon to work, and those found to be hypersensitive should be rejected. There should be periodic routine examinations of the workers in search of those who have skin and other ailments, and those found should be given prompt attention.

The proper ventilation of workrooms is of prime importance in the prevention of occupational skin hazards. If the irritating gases or dusts are sucked away from the workers, there will be fewer cases of dermatitis. Exhaust hoods should be properly placed over processes giving irritating dusts or gases. Floors should be washed out at the end of each shift to remove dust. Cleanliness should be emphasized. Shower baths and lockers should be provided for the workers, and they should be required to use the showers and change from working to street clothes after each shift. It has been found that furnishing clean work clothes to the workers every day stopped outbreaks of dermatitis. In oil refineries the wearing of clean work clothes and the compulsory use of shower baths has stopped the occurrence of oil acne and oil boils, and has lessened the incidence of tumors of the skin.

In occupations where the worker is exposed to irritating dusts such measures

have also helped in the abatement of dermatitis. Protective ointments have been found useful temporarily, pending the installation of other more suitable preventive measures.

Legislation

Laws for compensation for industrial skin diseases are not uniform in different states. Only eleven states have laws for the compensation of industrial skin diseases. Some of these states specify the causes for which skin diseases are compensated; others do not. It would be very desirable to have model laws for compensation drafted and made uniform throughout all of the states. Most of the states that compensate for skin diseases have lay boards to decide whether a disease is or is not of occupational origin. Doctors are called to testify before these boards, and very often an unfavorable impression is made by so-called experts giving opposite opinions. The boards cannot know that an unjust claimant may have asked many experts to testify in his favor before he found one unscrupulous enough or ignorant enough to do so. They only see two experts, of equal standing as far as they know, giving opposite opinions, and the result is that the board forms wrong impressions as to the honesty and knowledge of the medical profession. Moreover, the board is more likely to be impressed by the positive and glib answers of a loquacious charlatan than by the quiet and scientifically reserved opinions of an ethical specialist. Compensation boards should be composed or be guided by the opinions of an impartial group of State-paid physicians totally divorced from politics if possible, and chosen for their familiarity with industrial processes and industrial diseases.

It certainly is advisable for the physician handling these cases to be familiar with the compensation law of his own state. Even then, legal advice concerning past court decisions on cases appealed to higher courts may be of interest in the matter of how the law has been interpreted in the past in similar cases.

A brief description of some of the industries actually studied follows:

Rubber Industry. Rubber itself is rarely the irritant. Cases of dermatitis caused by wild rubber are possible, that is from ruh-

ber which is obtained from South America and Africa which is smoke cured in contradistinction to plantation rubber, which is acid cured. In smoke curing, the products of combustion, such as acetic acid, phenol and tarry matters, are impregnated in the rubber and may irritate sensitive workers. The accelerators which have caused the most trouble have been hexamethylenetetramine, trimene, tuads and paraphenylen-



Fig 5 Mineral oil folliculitis of the thigh caused by oil saturated clothes

diamene Hexamethylenetetramine and "ppd" are used very little at present in the rubber industry. Properly cured or vulcanized rubber is very rarely the cause of irritation. Among rubber workers it is chiefly the uncured compounded rubber that causes dermatitis. Among the wearers of rubber goods it is usually the excess of accelerator or anti-oxidant which "blooms out" on cooling of the rubber leaving a fine powder of these chemicals that causes a dermatitis.

Oil Industry In this industry the handlers of oils, greases, and waxes may develop conditions varying from a folliculitis to nodular growths. Paraffin pressmen develop wax warts on the arms and hands. Cancer has been found to occur with unusual fre-

quency in this industry. Oil boils or oil acnes are also very common. Oil acne differs from acne vulgaris in the fact that it forms around the hair follicle and not around a sebaceous gland and it occurs on the arms and legs, not on the face and back.

Heavy Chemicals. Dermatitis in this industry occurs very frequently. Acid and alkali burns are common and many of the chemicals have an irritating action because of their acidity. Such cleaning agents as tri-sodium-phosphate and metasilicate of soda act as irritants on the skin of workers handling them. Burns with chloride of zinc, sodium fluoride, and soda ash are common among workers handling these products. Many of these substances cause irritation of the nasal mucosa and even perforation of the septum. Chromic acid and its compounds, the fluorides, the cyanides and some of the compounds of arsenic are examples of such substances.

Synthetic Dye Manufacture. Very few of the finished dyes are general irritants. If they were, people could not wear dyed goods. A few of the dyes, such as paraphenyldiamene, bismarck brown, auro-



Fig 6 Dermatitis caused by dinitrochlorbenzol, an intermediate dye used in the manufacture of sulphur black.

mine, saffranine, crystal-violet, malachite green and anilin black, do cause dermatitis among a small percentage of workers handling them and also among hypersensitive people who wear materials dyed with them. We have found that dermatitis apparently caused by dyed goods was often due not to the dye, but to the finish used on the goods. These finishes consist of sulphonated oils, some of which are not properly neutralized; also of compounds of formic acid. Many of the intermediates used in the manufacture of synthetic dyes are irritants. The sulphonic acids of the various organic compounds which are intermediates in synthetic dye manufacture contain sufficient sulphuric acid to cause dermatitis. Dinitrochlorbenzol is probably the worst irritant in synthetic dye manufacture. Many of the workers are highly sensitive to this product.

Many of these intermediates are also sensitizers, that is, exposure to them for a length of time will cause a previously immune person to become hypersensitive. This is especially true of the nitro and the nitroso compounds. In the manufacture of synthetic dyes, the men who handle the filter presses, the flaking machines, the dryers and the grinders are especially exposed to irritants. The older machinery caused more exposure than the modern installations. The newer types of plants are so constructed that the process is totally enclosed, there being no contact with irritating materials from the raw to the finished product. Containers are emptied by suction into tanks and these tanks communicate with kettles by means of pipes and their contents can be interchanged simply by turning a valve. The kettles are provided with suction ventilation so that when they are opened, fumes are drawn away from the opening. Filtering of materials is done in totally enclosed continuous suction filters which discharge their product into drum dryers which in turn discharge their product into totally enclosed grinders from which the final product is poured into barrels. In such plants the incidence of dermatitis is very small.

Leather Tanning. The most serious health hazard in leather tanning is, of course, anthrax. Fortunately, it is of rare occurrence. The chemicals used in leather tanning are frequently the cause of dermatitis. The chromates cause dermatitis and ulcers. Lime, sodium sulphide, and arsenic are used as unhairers. They also cause dermatitis. Sometimes, sumac is used as a tanning agent, and hypersensitive workers develop a dermatitis from it. The leather

dyes are often blamed for causing dermatitis, but are actually rarely at fault.

Rayon Industry. The two principal forms of rayon manufacture are the viscose method and the cellulose acetate method. In the viscose method, wood pulp is exposed to sodium hydrate, which softens and swells it. This product is then shredded and stored for ageing. It is then submitted to the action of carbon bisulphide in a revolving drum,



Fig. 7. Synthetic dye worker with an acute "oleum" dermatitis or burn.

resulting in a compound called cellulose xanthate. This is dissolved in a solution of sodium hydrate, forming a substance called viscose. The viscose is forced through revolving orifices called spinnerettes into an acid solution which precipitates the cellulose and forms the rayon thread. The thread is spun and spooled and then bleached, combed, dyed and woven into rayon material. The viscose is also forced through narrow slits into the precipitating solution to form sheets of cellulose called cellophane. Dermatitis occurs among the men handling the spinnerettes due to the action of the acid solution into which the viscose is forced. Viscose is highly caustic and burns the skin if not quickly wiped off. In bleaching rayon, chlorine is extensively used and dermatitis sometimes results from the bleaching solution. The coning oil, consisting of sulphonated vegetable oils, also causes dermatitis in susceptible workers.

Bottle seals are also made of rayon and have caused dermatitis among handlers of wet rayon bottle seals.

Acetate rayon is made by an entirely different process. Cotton linters are subjected to the action of glacial acetic acid and acetic

anhydride and sulphuric acid. The resulting jelly-like substance is saponified and then neutralized and the cellulose acetate is precipitated by washing with water. After drying, it is dissolved in acetone and then forced through spinnerette machines and wound into threads. No dermatitis occurs but cases of burns from the acetic acid are very common.

In preparing silk for weaving and knitting, called silk throwing, dermatitis occurs among the girls who handle the wet silk. This is due to the wetting solution which often contains a high percentage of soap. The soap is the actual irritant.

Systemic poisoning by carbon bisulphide and hydrogen sulphide occurs at times among workers in rayon. Carbon bisulphide may be breathed when cellulose xanthate is made and hydrogen sulphide is liberated over the precipitating tanks. In making cellulose acetate, acetone jags occur at times in the hot filter rooms.

Linseed Oil. We have investigated outbreaks of dermatitis among workers of linseed oil. Dermatitis in this industry can be caused by the sharp seed points in the linseed oils; by parasites; by oils of mustard and rape which contaminate the linseed, and

by the filter mats used, which are made of human Chinese hair.

Miscellaneous. In candy making, the sugar and the essential oils used for flavoring are causes of dermatitis. In the manufacture of formaldehyde, hexamethylenetetramine, the dermatitis usually occurs among men working in the dryers. In explosive manufacture nearly all the materials used are irritants. Ground glass, oxidizing agents, like potassium chlorate, manganese dioxide; explosives like fulminate of mercury, T. N. T., lead azide, lead styphnate, tetryl, dinitrofluene, are examples. Workers with lead styphnate have their hair and skin turn yellow, very much as if it was dyed with picric acid. Workers with a new explosive called sensol, the formula of which is a secret, often develop dermatitis. Most of these substances, however, are not irritating to everyone, but only to certain individuals.

Dermatitis occurs among the makers of insecticides. The insecticides used for spraying trees and vegetables are usually lead arsenates. Last summer these substances were used in an effort to destroy a plague of grasshoppers in the northern part of the United States and resulted in an outbreak of dermatitis.

References

1. Lane, C. G.: A Brief for the More Accurate Classification of Industrial Skin Diseases, *Arch. Dermat. & Syph.* 7:77-80 1923.
2. Lane, C. G.: Skin Diseases with Particular Reference to Their Industrial Application, *J. Indust. Hyg.* 7, No. 10 1925.
3. White, P. R.: Anomalies in Interpretation of Industrial Dermatoses, *J. State Med.* 40:559-572 1932.
4. Wise, Fred, and Sulzberger, M. B.: Eruptions from Drugs and from External Medicaments, *Pennsylvania Med. J.* 37:973-983 1934.
5. Schwartz, L.: Dermatitis in Synthetic Dye Manufacturing, *Public Health Bulletin* No. 215:18-27, (Oct.) 1934.
6. Schwartz, L.: Outbreak of Dermatitis in Cotton Mills Due to Varnish, *J. Indust. Hyg.* 15:214-225, (July) 1933.
7. Tulipan, L.: Problems in Industrial Dermatology, *Medical Record* Nov. 1934.
8. Osborne, E. D., and Putnam, E. D.: Industrial Dermatoses, *J.A.M.A.* 99:972-975 1932.
9. Mayer, R. L. and Neuman, A.: Die Beteiligung Bestimmter Pilzkrankungen an Beruflicher Hautkrankheiten, *Arch. F. Gewerbepath. U. Gewerbehyg* 2:599-617 1931.
10. Ramirez, A. M. and Eller, J. J.: The "Patch" Test in "Contact Dermatitis," *The Journal of Allergy* 1:489 1930.
11. Sulzberger, M. B. and Kerr, P.: Sensitizations of Eczematous Type, *J. of Allergy* 4:326-335 1933.
12. Kitchevatz, M.: Mechanism de la Photosensibilisation de la Peau Par la Chlorophyll, *Compt. rend Soc. de Biol.* 116:675-678 1934.
13. Wieder, L. M.: Occupational Melanosis with Report of a Case, *Arch. Dermat. & Syph.* 25:624-643 1934.
14. Keston, B. and Lyons, R.: Dermatitis due to Contact with Orange Peel, *J. of Allergy* 3:552-557 1932.
15. Coca, A. F.: Specific Diagnosis and Treatment of Allergic Diseases of the Skin, *J.A.M.A.* 103:1275-1277 1934.
16. James, A. P. R.: An Aid in the Management of Occupational Contact Dermatitis, *Arch of Derm. & Syph.* 30:30-32 1934.

A handy compendium of information on the "Control of Communicable Diseases" appears in the August 9 issue of *Public Health Reports* (Washington, D. C.). It is prepared by a Committee of the American Public Health Association and covers every-

thing from actinomycosis and ascariasis to yaws and yellow fever. It treats recognition of the disease, etiological agent, source of infection, mode of transmission, incubation period, communicability, susceptibility and immunity, prevalence, and control.

HAY FEVER AND HYPERESTHETIC RHINITIS

Treatment by Ionization

Lt. M. HURD, M.D., *New York City*

Electroionic medication or medical ionization, properly called iontophoresis, was much in vogue thirty years ago. Then its use subsided until Warwick reported his successful results. Such ionization is the introduction of ions into the skin or mucous membrane by the galvanic current.

The galvanic current can be produced by several methods, namely: (1) Batteries which give a pure constant current. This set up has been made for years by different manufacturers. An inexpensive set has just recently been described by Douglas Macfarlan.¹ (2) The galvanic wall plate where the power line is D.C. current. (3) The motor generator.

A report on tests of three varieties of apparatus by the Westinghouse laboratory is as follows:

1 Wappler Wall Plate. This device operates from the D.C. supply and the output therefore, takes on the character of the D.C. from the power mains. Inasmuch as the ripple in the majority of power systems is entirely negligible, the galvanic output of this machine is similar to the output from a battery in regards ripple.

2 Burdick Galvanic Generator. This device consists of a motor generator set, hence the output will have the characteristics of the generator rather than of the current from the power lines. Measurements made on an oscillograph show that the output at milliamperages up to about thirty was almost entirely without ripple, the ripple being so small that it could not be measured with our laboratory equipment.

3 Another Make of Galvanic Generator. This machine also contains a motor generator set with the result that the current delivered has the characteristics of the generator. The generator output has a considerable amount of ripple, the percentage varying with the milliamperage output of the machine. With small amounts of output the percentage ripple is quite small and the percentage increases when the D.C. milliamperage output increases. Oscillograms made at an output of 30 ma. show a ripple content of approximately 8 per cent. The

frequency of this ripple is 1080 cycles per second.

Each type of apparatus has its adherents. It probably makes no difference, as clinically the patients have about the same degree of discomfort, the appearance of the membrane is the same, and so are the after results.

The current is unidirectional, of low voltage and amperage. The positive pole repels hydrogen, alkalis and metals, and a convenient way to remember this is with the initials "H A M P", the "P" indicating "positive". The negative pole repels acid, acid radicals and halogens. The galvanic current produces two effects: (1) physiochemical and (2) physiological. The effects manifest themselves at the point of entry and exit and also along the path of the current between the poles.

The effect at the poles is simple, but what takes place along the path of the current through the body is still undetermined and subject to much controversy. If the two terminals are metallic plates and are placed against the wet skin, there will be caustic effects. The sodium chloride of the body fluid will break up into caustic sodium hydroxide at the negative pole and hydrochloric acid at the positive pole. To overcome this destructive action both poles, metallic terminals, must not come in direct contact with the skin or mucous membrane but must be separated by a pad of cotton or the electrolyte. The pads must be sufficiently thick so that the caustic chemicals from the metallic poles cannot diffuse to reach the skin and mucosa.

As the current flows through the human body many complex factors come into play besides the action on the sodium chloride. In the body, there are also colloids and other metals and acids. There must be migration, or at least redistribution of ions in the body between the poles, but if the current is kept within

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physiological limits, there are no demonstrable physiological effects.

Electroionic Medication

Iontophoresis or ionization is the attempt to pass certain drugs or chemicals through the skin or mucosa, by means of the direct current. If an aqueous solution is made of a chemical, there are positive and negative ions liberated which are moving about in a disorganized way. If a constant current is allowed to flow through this solution, the positive ions go to the negative pole, and the negative ions to the positive pole. For example; in a solution of sodium chloride, the sodium ions go to the negative pole and the chlorine ions to the positive pole. Leduc,² thirty years ago, claimed that ionic medication, would place the drug where wanted, in any amount, and demonstrated that strychnine sulphate and potassium cyanide could be passed through a rabbit's skin to kill the animal. Pack³ verified these experiments, but showed salts of heavy metals do not penetrate in the same fashion.

Subsequent investigators demonstrated that different ions moved at a fixed rate of speed which increased with the voltage and diminished with the distance in the electrolyte through which they travelled. The speed is roughly in proportion to the atomic weight. Hydrogen is the fastest, while the heavier atoms are slower. Therefore, the heavy metals like zinc, copper, tin and cadmium are many times slower than hydrogen. The hydrogen ions being present in great numbers in the body fluids, carry nearly all, if not all of the current, while the ions of the heavy metals being very much less numerous, probably do not transmit the current at all.

It has also been demonstrated that the moment the ion of a heavy metal comes in contact with the body, it loses its charge and combines with the proteins; and the effect taking place beyond the mucosa is due to the passage of the current only. Pack et al.,³ found that mercury was not absorbed and came to the same conclusion as Turrell.⁴

The zinc ion attracted from the positive electrode to the negative pole, on arriving at the surface of the body, lags behind, and the current is carried on much faster by the

hydrogen ions of the tissues. The zinc ion is thus set free to enter into chemical combination with the tissue constituents and forms an oxychloride of zinc, which is electrically deposited upon the superficial tissues. The process is one of electrodeposition resembling the electroplating of commerce. The skin or mucous membrane thus forms a virtual negative pole.

This assumes that there is a superficial deposit of zinc combined with the proteins to form the zinc albuminate. Friel⁵ says ionization is strictly a local treatment and, therefore, should be applied to the whole area. Lierle and Sage⁶ state in conclusion: "The possibility of the deposition of metallic zinc in living tissues is remote and open to question."

McMahon⁷ shows that; "ionizing with zinc sulphate, the dog's normal frontal sinus mucosa causes marked changes in the mucosa. Namely engorgement of all the capillaries of the subepithelial tissue. There was also present a marked extravasation of red blood cells into the edematous subepithelial tissues, and certain more or less extensive destructive changes in the epithelium."

My own examination of polyp tissue before and after ionization, showed, with the same dose as McMahon used, some increase in edema to a definite coagulative effect which had fairly well penetrated through the polyp, but no necrosis. It is possible that the difference between McMahon's findings and mine is the difference between normal mucosa and polypoid tissue.

When zinc sulphate is dissolved in water a proportion of the molecules split up into two fragments, namely: (1) an atom of zinc, (2) a group of atoms of SO_4 . A solution of a substance in water which undergoes this dissociation into fractions is called an electrolyte. The positive and negative fractions of the electrolyte are called ions. Positive ions are called kathions, negative ions are called anions. It has been found that the dissociated molecules in a concentrated solution increase the resistance to the motion of the ions among them, therefore, if one increases the dilution until a point is reached where dissociation is complete, the maximal value of electrolyte conduction is reached. Therefore, the weaker the solution the better and the

strength of zinc sulphate should be $\frac{1}{2}$ per cent.

Ionization of the nose has a few advocates, Friel,⁸ Crabbe,⁹ and Franklin,¹⁰ in England and Hollender,¹¹ and Warwick,¹² in the United States. The latter claims much better results by adding a small quantity of tin and cadmium to the zinc, and on account of his claim Alden,¹³ took up his technic and has reported such favorable results that it has created a furor for this method of treating hay fever and hyperesthetic rhinitis (allergic coryza).

Warwick lays much stress on technical detail, namely that the electrode must be used only once, the resistance must be low, the electrolyte must be the one which the Burdick Company puts out in ampoules, and his special generator the only one which will give the proper current.

There was some criticism that these formulae were kept secret, but finally a mimeographed formula from the Burdick Company stated that the electrode was composed of zinc 97.1 per cent; tin 1.9 per cent; and cadmium 1.0 per cent. An electrode which I had analysed was found to contain zinc 91.8 per cent; lead 3.83 per cent; tin 2.54 per cent; and cadmium 1.70 per cent, also a trace of bismuth and iron. This led me to believe that it was made from an impure zinc metal. The present electrode contains the proportion of zinc, tin and cadmium as stated: zinc 86.04 per cent; tin 9.48 per cent and cadmium 4.34 per cent.

At first the electrolyte was said to contain zinc sulphate grains 9; stannous sulphate 0.9 grains, cadmium sulphate 0.45 grains, and a blue dye. My examination of the contents of the ampoule showed undissolved violet dye and the presence of zinc and cadmium sulphate, and no tin. The present formula has been changed to zinc sulphate 8.92 grains, stannic chloride 1.42 grains, cadmium chloride 0.45 grains, to the ounce. This would lead one to believe that the formula need not be so exact, and is subject to modification and improvement. It is better to have the electrode of the same metals as the salts in the electrolyte, as the acid radical will attack the electrode and form more ions of the same sort.

Remembering that the ions travel with

a speed in relation to their atomic weight (zinc 30, cadmium 48, tin 50), theoretically it would seem that the zinc ions would be deposited much faster than the other two, and considering the much larger proportion of zinc, that the amount of tin and cadmium deposited in the tissues would be very little indeed. How much this is an improvement over straight zinc ionization remains to be determined.

Warwick claims that the resistance of the circuit must be kept low; if it is high the nose must be repacked as it was not done properly at first. This is true as the lower the ohmage or resistance, the lower the voltage will be, and this will mean less discomfort for the patient; but, it is not always possible.

The first reading of the ohmage, as soon as the connections are made, may be high, and after passing a constant current of a couple of milliamperes for a few seconds, the ohm reading will be several thousand lower. It depends as much on the hair, skin and fat of the arm, which have high resistance, as on the condition of the electrolyte in the nose.

Technic

Granting that you have an apparatus to generate galvanic current, whether it is an inexpensive battery set-up or a Burdick machine, it should have meters so that you may know how many ohms, volts and milliamperes you are using.

The Burdick apparatus is especially built for nasal ionization, and eliminates error, as far as possible in a machine. This has ohm and milliamperage meters, terminals which plug in, so that you cannot make a mistake as to poles, a clock which times length of current flow and also turns off the current slowly at end of treatment, so that there will be no shock.

According to Warwick, the nose should be anesthetized, then carefully packed with cotton strips saturated with the electrolyte, and the metal electrode which has been wrapped with cotton, introduced in the center, and more cotton packed around it. The arm cuff separated from the skin by a pad saturated with saline is placed on the forearm, after the skin has been cleaned with a grease solvent. The negative pole is connected to the arm cuff, and the positive to the electrode in

the nose. The ohm meter reading, if satisfactory, should be between 2000 and 3000. According to Ohm's law, amperage equals voltage divided by ohmage. Two factors being known, it is easy to obtain the third. For example, ohms being 3000, milliamperes 10, multiplying ohms by milliamperes gives 30 volts. If 6000 ohms, it would be 60 volts, so it is well to have the resistance as low as it can be obtained by good contacts at the two poles. Warwick advises a dose of 100 milliamperes minutes, that is, 10 milliamperes for ten minutes.

This dose is arbitrary as it depends on the surface area of the nose, as well as the time and current. For example, if one nose had an area of forty square centimeters, and received 100 milliamperes minutes, another nose of eighty square centimeters would have to have 200 milliamperes minutes to receive the same electroionic dose.

The current is gradually turned on until it reaches the milliamperage desired. As soon as the current begins to flow at the required strength, the patient notes a metallic taste, and there is an increased flow of secretion from the eyes, nose, and mouth.

After the current has flowed for the required length of time it is gradually turned off and the nasal packs removed. The nasal membrane is found to be contracted and coated with a grayish white deposit.

The patient now complains of a headache which will become severe and last for several hours, requiring a sedative. The nose becomes obstructed and the next day the mucosa is covered with a jelly-like fibrin, which persists for from three to five days, during which time there is almost complete nasal obstruction. The fibrin should be allowed to come off spontaneously. The membrane will remain red for some days following.

I have made some modifications in the technic, abandoning the clumsy Burdick cuff, because it was hard to get good contact, and the patients complained of disagreeable sensations in the arm, and using the old method of the flexible sheet metal, very heavily padded with cotton (one-half inch thick when wet), saturated with normal saline, as the large negative electrode. I administer atropine sulphate, gr.

1/150 before the treatment, in order to reduce the unpleasant salivation, and now use the method of flooding the nose with the electrolyte instead of packing, which was very uncomfortable, and in many cases, on account of anatomic irregularities it was impossible to pack satisfactorily.

Mr. Anderson, president of the Burdick Company, gave me a "U" shaped glass tube for this purpose, which I found was devised by J. Sandison Crabbe of Birmingham, England, in 1920. Gale,¹⁴ devised a similar tube which was also used in the same way. I have used a simpler and less awkward tube which is made with a hard rubber nasal tip, connected with rubber tubing to a small glass tube just large enough to admit the electrode. Near the end of the glass tube a piece of tape is tied. At the other end of the tape is a two ounce lead weight. The rubber tubing is three inches and the glass tubing four and one-half inches long. The patient bends forward until the face is parallel with the floor, the nasal tip is held tightly in the naris by the patient, and the glass tube is brought up vertically beside the patient's ear and held there by the tape which is passed across the back of the head and held in place by the weight. By this method the nose is flooded until the electrolyte runs out of the opposite naris, and the electrode is inserted into the electrolyte in the glass tube. There is much less discomfort, in fact, it is a pleasure to the patient compared to packing, and is superior to packing as all mucosal surfaces are in contact with the electrolyte, which is impossible by the pack method. All good things have a drawback, and in this case, it is that the olfactory cleft is included, whereas in packing it is not, and the result is an anosmia which remains for some weeks.

Results

Warwick¹² reports forty cases treated over a period of more than a year previously, with practically 100 per cent results, principally for hay fever, a few cases of hyperesthetic rhinitis, and three cases of asthma with hay fever. Many of these have had no recurrence for from one to six years, a wonderful record.

Alden¹³ treated nineteen cases in 1933 for autumnal fever during the attack, and

all were relieved. Nine had no recurrence the second year, two had similar symptoms as in 1933, eight had such mild symptoms that he did not think it necessary to re-ionize them. In 1934, forty-one cases were ionized prior to symptoms, 50 per cent were free of symptoms.

The Burdick Company has compiled the results of many men who used the method of Warwick during 1934, and a few cases in 1933. Roughly the cases are:

<i>Hay Fever</i>	<i>Cases Reported</i>	<i>521</i>
95-100% improved.....	302	58.0%
85-90% improved.....	44	8.4%
75-80% improved.....	43	8.2%
60-70% improved.....	20	3.8%
40-50% improved.....	46	8.6%
less than 30% improved.....	8	1.5%
no relief.....	58	11.1%

<i>Asthma</i>	<i>Cases Reported</i>	<i>194</i>
95-100% improved.....	76	39.0%
80-90% improved.....	8	4.1%
70-80% improved.....	17	8.7%
60-70% improved.....	9	4.6%
50-60% improved.....	25	12.8%
40 and under improved.....	5	2.5%
no relief.....	54	27.7%

<i>Hyperesthetic Rhinitis</i>	<i>Cases Reported</i>	<i>111</i>
95-100% improved.....	47	42.3%
80-90% improved.....	8	7.2%
70-80% improved.....	15	13.5%
60-70% improved.....	3	2.7%
50-60% improved.....	10	9.0%
less than 40 improved.....	8	7.2%
no relief.....	20	18.0%

<i>Allergic Conjunctivitis</i>	<i>Cases Reported</i>	<i>6</i>
Completely relieved.....	4	no relief 2

<i>Urticaria</i>	<i>Cases Reported</i>	<i>22</i>
Completely relieved.....	3	no relief 17
Moderately relieved.....	2	

<i>Migraine</i>	<i>Cases Reported</i>	<i>2</i>
One moderately relieved...one slightly relieved		

Allergic Dermatitis not urticaria?
Two cases not relieved.

Hollender,¹¹ using zinc sulphate, reports very much the same results for hyperesthetic rhinitis. Franklin¹⁰ reports hay fever 50 per cent, hyperesthetic rhinitis 60 per cent free of symptoms. He uses zinc sulphate 1 per cent and gives three treatments using three to five milliamperes for from 12 to 20 minutes.

Case Reports

A woman, age 27, for ten years has had a watery nose which had become so bad that she could not work on account of constant nasal drip, and sneezing, who was thoroughly tested by two expert Allergists with no results, showed a very pale and swollen mucosa with a profuse serous dis-

charge. She was ionized over a year ago, all symptoms are now relieved although the mucosa is still pale. She has since discovered three things which caused her symptoms, pineapple, peas, and something which is in a package called "Spaghetti Dinner."

A man age 26, for six years had hay fever and autumnal fever, and for the balance of the year sneezing and nasal discharge up to 9:30 A. M. daily. He received protein injections with no result. He was ionized last June and immediately afterward went on a four thousand mile automobile trip through the middle west. He has had no allergic symptoms since, and fewer colds. He presented himself one year later with tree pollen coryza.

Another illustration where the mucosa was only wet with electrolyte is of a girl twenty years of age. Nasal obstruction for two years, watery discharge, sneezing, burning sensation in nose and eyes. Many eosinophiles in the discharge, 10 per cent in the blood smears. She was ionized by the flooding method instead of packing. The technic was poor, most of the electrolyte leaked out and there was none in the nose when the tube was removed. Warwick solution was used on one side, zinc sulphate 2 per cent on the other. After reaction was the same on both sides. She was relieved except that she sneezed about once in three days. In this case the mucosa was only wet, not covered with the electrolyte, yet a very good result was obtained.

I am not ready to tabulate my results, as in some cases I have used the Warwick method, in others the Warwick on one side and another technic on the other side, and in still others a different method.

In cases of hay fever ionized during the attack the percentage of good results has been very high, in hyperesthetic rhinitis over 70 per cent of the cases have become symptom free.

Conclusions

1. The nasal mucosa shows microscopic changes immediately after ionization.
2. Zinc ions do not enter the tissues in any appreciable amount.
3. There is marked clinical reaction of the nasal mucosa lasting about one week.
4. Symptoms of hay fever disappear immediately after ionization in nearly all cases.
5. Hyperesthetic rhinitis is relieved of symptoms in the majority of cases.

References

1. Macfarlan, Douglas: *Archives of Otolaryngology* 21:456, 1935.
2. Leduc, Stephane: *Electric Ions and Their Use in Medicine*, Rebman, Ltd., London, 1908.
3. Pack, Underhill, Epstein & Kugelmass: Experimental Studies in Electrotonic Medication, *American Journal of Medical Science* 167:625, 1925.
4. Turrell, W. J.: *Archives of Radiol. & Electro.* 27:130, 1922.
5. Friel, A. R.: *London Practitioner*, 101:315, 1918.
6. Lierle, D. M., and Sage, R. A.: Underlying Factors in Zinc Ionization, *Annals of Otolaryngology and Laryngology* 41:359, 1932.
7. McMahon, Bernard J.: *Trans. Am. Laryngological Association* p. 35, 1934.
8. Friel, A. R.: *Electric Ionization*, second edition. J. Wright & Sons. Bristol, 1922.
9. Crabbe, J. Sandison: *British Journal of Physical Med.* December 1933.
10. Franklin, P.: *Medical Press*, March 20, 1935.
11. Hollender, A. R.: *Archives of Otolaryngology* 21:448, 1935.
12. Warwick, H. L.: *The Laryngoscope* March 1934.
13. Alden, A. M.: *The Laryngoscope* p. 741, Sept. 1934.
14. Gale, C. K.: *The Laryngoscope* p. 110, Feb. 1935.

Discussion

DR. CLAUDE G. CRANE, *Brooklyn*—I wish to express my appreciation for the opportunity to discuss Dr. Hurd's paper. Dr. Hurd has acquired the art of brevity, and I shall endeavor to follow his example. Dr. Hurd has described the technical details of ionization, in general, so well, that any comments from me would only consume time, without adding anything whatever.

It is evident however, that a distinct change takes place in the mucosa and submucosa, following ionization. As Dr. Hurd stated, McMahon has demonstrated that the mucosa of the frontal sinus, following ionization, undergoes not only a sub-mucous hyperplasia, but a destructive process as well. Warwick had examined the mucosa and sub-mucosa, before and after ionization, and found no destructive process had followed ionization, and that the change in the submucosa was apparently permanent.

I agree with Dr. Hurd, that the dose must of necessity vary, with the area of the mucosa in the individual nose. The use of atropine before treatment is certainly a help in reducing the profuse secretion from the nose and the salivary glands.

Dr. Hurd's method of flooding the nasal cavity with the electrolyte solution should avoid the unpleasant features of the packing method, and should place the solution in contact with every part of the mucosa. The anosmia which results, while unpleasant, is not serious if one can be sure of no permanent damage. Dr. Hurd, I am sure has satisfied himself that the result is only transitory. In the event of the need for several ionizations, we should consider the possible results of repeated ionization on the olfactory area.

My experience with ionization began in February, 1934 and I have confined my treatment to hayfever, asthma, and hyper-esthetic rhinitis.

We may consider two main groups—the extrinsic and the intrinsic. In the extrinsic group, we have all of the inhalation and ingestion cases. In the intrinsic group, we have all of the bacterial and endocrine cases. In the treatment of all of the groups it is evident that the elimination of the specific cause is not only the simplest, but the most efficient method of choice. Whenever this is possible, we have no occasion to search further for satisfactory treatment. This elimination is very simple when the cause is confined to a single factor. Whenever it is not possible to eliminate the cause, we have to resort to some form of desensitization.

Immunization by hypodermic treatment, with extracts of the offending foreign protein, whether pollen, dust, or other proteins, I need only mention. The ingestion group may also be satisfactorily taken care of by the elimination of the particular food, or foods, whenever one or two foods are involved. This may offer the most satisfactory treatment, however, this may not be practicable and immunization by use of extracts is indicated. At this point I wish to mention that I believe the elimination diet offers the most reliable diagnosis.

In the intrinsic group I will only acknowledge the endocrine cases, the bacterial cases presenting the satisfactory group for treatment. We culture every possible area separately and note the skin reaction from each group. Whether one uses the scratch method or the intradermal method, bear in mind that the reaction, if positive, requires a longer period to manifest itself than the pollen or food reaction.

In considering positive or negative skin reactions, it seems to me we should bear in mind that the skin and mucosa of any individual need not be equally sensitive. This accounts for some of the negative, or moderate skin reactions.

In the bacterial cases, a thorough clean-up of all areas of infection should be attempted. This may require surgical attention, or conservative measures may be indicated. With this accomplished, in whole or in part, as may be possible, the patient should be immunized by use of vaccines made from the bacteria found on test to be positive. The same principles apply for immunization treatment, whether one is using pollens, dust, foods, bacteria, or any other protein. All of the foregoing is so familiar to all of you that there is no occasion to elaborate further.

We will discuss a rather large group, which includes all of the groups, classified according to etiology. To this group, belongs all those cases, in which, either elimination of the cause, or immunization has been found totally inadequate, or sufficiently so, to afford the patient satisfactory relief from symptoms. It is in this group that so many methods of therapy have been used with varying success.

For the most part, we can term this type of therapy as 100 per cent empirical. I will merely mention a few of them. Caution of the nasal mucosa, with heat, or chemicals, to the point of tissue destruction; desensitization, by injection of alcohol, into the inferior turbinate, or septum, or, into the anterior nasal nerve; injection of alcohol to desensitize the sphenopalatin ganglion by the Sluder technic, or through the posterior palatine canal (Ruskin). In literature from time to time, we have had reports on a series of cases treated very successfully by these various methods.

Concomitant with these enthusiastic and optimistic reports, we have had reported a series of cases, in which the same therapy has been used with total failure. Between these extremes, we have had a varying attitude toward all of them.

It is evident that we have had presented to us, many cases which have been so discouraging that any new method offered, attracts our attention and tempts us to try it. This is especially true if we are convinced that the measure is without any deleterious results, and the technic of application is practical and without much discomfort to the patient. Ionization meets these requirements.

Ionization for hyperesthetic rhinitis was used by Demetriades in Vienna over ten years ago. His method was crude, but he obtained some relief of symptoms. Franklin of London improved the technic and in 1931 reported some permanent cures.

About eight years ago, Warwick began his experimental work with ionization in the treatment of hay fever, asthma, hyper-

esthetic rhinitis, and allergic rhinitis, due to food allergy. In his first attempts he used zinc alone in the electrode and in the electrolyte. He found this resulted in severe reactions, and sometimes in the destruction of the mucosa. After experimenting with various combinations of metals, he selected a combination of zinc, tin, and cadmium, both for the electrode, and the electrolyte solution.

This resulted in less local reaction and gave the best therapeutic results. He perfected a galvanic machine which delivers a direct current, and is so constructed as to make an accurate measurement of the proper resistance, and current delivered.

It is essential to successful treatment that the technic be strictly adhered to in every particular. It is also important that any definite pathology within the nose be taken care of before treatment is started. If obstruction is present, sufficient to make it difficult or impossible to properly pack the nose and insert the electrode, such obstruction should be corrected before beginning treatment.

The theory on which the treatment is based, is for the most part empirical; however, it has been demonstrated that the sub-mucosa undergoes a definite hyperplasia, and on this a new membrane is formed which is not sensitive to proteins whether they be inhaled or ingested.

The sphenopalatine ganglion desensitization theory has its advocates but is doubted by some as alcohol injections are not successful.

It is probable that the ionization desensitizes the ganglion more effectively than does the alcohol. It was believed at first that the desensitization was purely local but it is more than likely that there is a more remote reaction, as indicated by the favorable results in urticaria, without nasal symptoms. I will not attempt to present to you, in detail, the many reports from all over the country, on the highly gratifying results of ionization. A list of the men of outstanding ability and reputation who have reported favorably, is, in itself, most convincing.

I might mention that the electrode consists of sulphate of zinc, 85 per cent, tin 10 per cent, cadmium 5 per cent. The solution is in the same proportions.

Tobey has reported sixteen cases with a conservative estimate of 85.6 per cent relief; of these cases, eight had hay fever, and gave 85.6 per cent relief. One was treated two months before the expected fall attack with no symptoms for the first half, but the last half showed the usual symptoms. All of his patients treated

after the onset of symptoms were 100 per cent relieved of all symptoms. One of his patients had urticaria asthma and hyperesthetic rhinitis, and was relieved for six months.

Alden in St. Louis, and the Jackson Clinic in Madison, found that the seasonal cases treated in 1933 were, with very few exceptions, free of symptoms during the 1934 season. Many favorable reports could be cited, but there is no occasion to present them to you, as you are as familiar with them as I. The consensus of opinion seems to be that the best results in seasonal cases is obtained when the ionization is given after the symptoms have begun. There seems to be a condition of the mucosa at that time which offers a more favorable soil for the ionization.

The use of the electrode for more than one treatment is not advocated by Warwick. He states that chemical analysis of the electrode, both before and after treatment, reveals a change in the chemical make up of the electrode, making it unsuitable for more than one treatment. I have tried using it once only, and have also used it twice, but I have not been able so far to draw any conclusions. Some time ago I decided to use the electrode more than once. The seasonal cases I treated last year gave the most satisfactory results when treatment was begun after the symptoms had developed.

The perennial hyperesthetic rhinitis

cases I have treated have given me excellent results. The chronic asthma cases present the greatest difficulty and certainly are discouraging. I have had some cases which were relieved only 10 per cent. I have, however, had some cases which have had 100 per cent relief, although this represents a very small percentage. Between these two groups, I have been able to relieve them sufficiently to justify the attempt; all of these cases presented a total failure from every other therapeutic measure.

Last April I spent some time with Warwick, and was much impressed with the amount of research he had done to perfect his present technic. In treating these allergic cases, we should not lose sight of the various factors that enter into the problem. I believe that, even though we use ionization, every phase of allergy should be given proper attention. We should keep in mind that, no matter how excellent the result obtained from any local treatment, we have something more basic at fault in many instances. These cases are over on the alkaline side; and we should institute treatment to restore the acid-alkaline ratio.

I am sure that ionization has a definite place in our therapy, for those cases which have not responded to other measures. I am also convinced that it may very well be a satisfactory substitute in many cases, which may respond fairly well to immunization, but are difficult to control.

MISSISSIPPI'S STRONG MEDICINE

Driven to drastic measures by the alarming increase in unjustified malpractice suits, the Central Medical Society of Mississippi has adopted a series of resolutions stating that to carry these suits through the courts often requires the collusion of members of the legal and medical profession; and speaks of them as legalized blackmail. In order to combat this increasing tendency the organization has forbidden every member of the Society to give evidence in malpractice action unless the testimony has been examined and proved by those designated in the Society for the purpose. Through various steps all the evidence is investigated and then put up to impartial medical "consultants" who then will express in writing their individual opinion as to the validity of the suit. The physician will then be encouraged, or forbidden, to testify according to the opinion of these who are considered to be absolutely fair and impartial experts. If, after the decision has been arrived at, the physician goes ahead and

testifies without paying proper attention to this decision he will be expelled from the Society for unprofessional conduct.

Physicians in Germany are not permitted to have a joint practice or medical partnership.

Many chronic typhoid carriers in this State have been cured of this condition by removal of the gall bladder, according to a report of the State Department of Health. The mortality was high in the cases over 50 years of age. "It is, therefore, advised that when contemplating a gall bladder operation on a typhoid carrier, due consideration be given to the age and health of the patient, that preliminary duodenal specimens be examined in each case to make certain that the focus of infection is in the gall bladder."

FACTS CONCERNING THE TREATMENT OF ANEMIA

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Slightly more than one hundred years ago Dr. Blaud described a method of treating an anemia which occurred most frequently in young women which was known as "chlorosis" because of the peculiar greenish tint which was observed in association with the pallor occurring in these patients. Excellent results in the treatment of this condition were described with the use of ferrous carbonate ("Blaud's pills"), usually given in gradually increasing dosage until large amounts of iron had been administered. Although the results of treatment by this means, reported even as late as 1903 by Christian, were satisfactory, the need for large doses of iron and the value of the graded scale administration were lost sight of for a number of years. There then ensued a period of small dosage accompanied by a lack of interest in the simple or iron deficiency anemias. Interest has been again aroused during the past ten year period of more intensive study of the blood dyscrasias, probably largely stimulated by the introduction of the liver treatment for pernicious anemia.

During this ten year period we have groped our way uncertainly through a maze of impressions and incomplete studies back to the precepts of Dr. Blaud; that is, moderately large doses of iron preferably administered in a graded scale of dosage.

Before discussing treatment in greater detail, let us first consider briefly the nature of the condition which we are to treat. This part of my discussion is concerned with the consideration of the so-called secondary or hypochromic anemias. In persons afflicted by this condition, there is primarily a deficiency of the hemoglobin rather than of red blood cells. The cause for this may be variously attributed to an inadequate supply or inefficient use of iron, or to loss of blood too rapid for replacement to occur.

Perhaps the most commonly observed cause for such an anemia is loss of blood.

This loss may be acute with sudden depletion of both hemoglobin and color in an otherwise normal individual. As to be expected, the blood levels will return to normal rapidly with the cessation of hemorrhage. But of greater importance from the standpoint of treatment are those individuals who are anemic because of chronic hemorrhage. In such patients the natural supply of iron is depleted through constant stimulation of the marrow there may be exhaustion, particularly associated with certain deficiencies in that formation of hemoglobin is retarded even though the source of the hemorrhage has been eliminated.

A second important group of individuals comprises those who have hypochromic anemia of uncertain origin. This group is almost entirely composed of women varying in age from young to mature old age, but most commonly described between the ages of 30 and 40. This variety of hypochromic anemia has been variously called chronic chlorotic hypochromic anemia, idiopathic hypochromic anemia, and others though often associated with achlorhydria or hypochlorhydria, this is not necessarily present in all cases, and the anemia does not differ in any essential respect from that present in chlorosis. The fact that idiopathic hypochromic anemia is most commonly in women above the age of 30, whereas chlorosis is generally described below that age, cannot be considered as evidence of a fundamental difference between the two conditions rather suggests that anemia is normally milder in the younger age group. No doubt nutritional inadequacies, multiple pregnancies, fatigue, infection, even chronic loss of blood may each have a part in the development of this anemia in the older age group.

It is not my intention to describe in detail the signs and symptoms occurring in this interesting and important group of patients; but I want, particularly, to call attention to the tan-colored blood which is so characteristic of idiopathic

hypochromic anemia in its more severe stages; to the dryness of skin and finger nails; and, to the fact that there may be complaint of soreness of the tongue, but never in my experience associated with the characteristic glossitis which may be present in pernicious anemia.

These cases may readily be distinguished from cases of pernicious anemia by an examination of the stained smear and by a determination of the individual cell volume, which figure may be as far below the normal individual cell volume as it may be above the normal in pernicious anemia. Again, one may be aided by the low icteric index value as opposed to the high reading in pernicious anemia. Finally, this group of cases may have relatively little decrease in the number of red blood cells as compared with that observed in hypochromic anemia resulting from loss of blood, although some of the most striking decreases in the hemoglobin levels are to be observed in this group, the hemoglobin at times dropping to between 2 and 3 grams per 100 cubic centimeters of blood. This explains the often intense weakness complained of even in the presence of higher red blood cell counts than occur in patients with pernicious anemia who may not complain of such extreme weakness.

Of essentially similar nature to idiopathic hypochromic anemia is the hypochromic anemia of pregnancy, which in its more severe form is probably only an aggravation of a pre-existing idiopathic type.

Then there are anemias which occur coincidentally with acute or chronic infection and which are, at least in part, dependent upon the infection.

Inasmuch as each of the groups described lack hemoglobin, the formation of which is dependent upon an adequate supply or utilization of iron, we must assume that treatment with adequate amounts of iron is necessary. It may, however, be important in individual instances to remove any existing focus of infection, to eliminate any source of hemorrhage either before or during the course of treatment or to stress the importance of an adequate, well-balanced diet which will supply the usual needs of the normal body or the unusual need of the individual case being treated.

We have all heard much about the necessity for the addition of copper to the medication of our anemic patients, and how this much needed copper may be supplied by an adequate ingestion of oysters. I am an enthusiastic advocate of the use of oysters, particularly served on the half shell, as a part of my own dietary regimen; but I am hardly convinced that there is evidence to support their use as a medicine for the anemic patient. There is little evidence available to support the idea that it is important to add copper to the iron in the treatment of anemia of the adult.

That whole liver may enhance the formation of hemoglobin seems to be quite definitely proved through the original work of Whipple and his collaborators working with dogs and supported by early work on the anemia of humans in my laboratory at the Peter Bent Brigham Hospital and subsequently by others. We have observed little benefit in these anemias from the various liver extracts when administered by mouth. We have, however, been definitely impressed with the results of treatment, particularly of the idiopathic hypochromic group, by means of intramuscular injections of a concentrated liver extract, such as is used in pernicious anemia, together with iron by mouth. Not only is clinical evidence of improvement more rapid and striking than with the use of iron alone, but also the actual rate of hemoglobin formation has been definitely increased. At the onset usually 1 or 2 vials (3 to 6 c.c.) of the solution (Lederle) is injected followed by 1 vial (3 c.c.) every 5 to 7 days until the desired result is obtained.

Much has been written recently concerning the use of iron in various forms so that I need not go into a detailed discussion of this subject. It seems quite well established that iron is most effective when given perorally rather than parenterally. We still lack evidence sufficient to establish beyond question, the distinct advantage in hemoglobin building of one iron salt over that of all others. The experience in my laboratory is that ferrous carbonate administered as Blaud's pill and ferric ammonium citrate given either in solution or in capsules, are equally efficient, if given in dosages such that the actual intake of metallic iron is compar-

ble. Ferric ammonium citrate is less likely to produce marked constipation and may, at times, prove to be somewhat laxative in its effect. In either case, less disturbance is likely to be precipitated if the increasing dose method of Dr. Bland is used. Ferric citrate proved to be slightly less efficient.

Just what the optimal dosage is for each patient must depend upon the results obtained. Doses of 30 grains (2 gm.) of Bland's pill and 15 grains (1 gm.) of ferric ammonium citrate have, in our experience, given satisfactory results in many instances and larger doses up to 60 grains (4 gm.) of the former and 45 grains (3 gm.) of the latter have been adequate in practically all instances. Although much larger doses are frequently advised, we were unable to note any definite difference in the effect of 45 grain (3 gm.) and 90 grain (6 gm.) doses of ferric ammonium citrate. It is obvious then that in order to determine the relative efficiency of two iron salts, they must be compared in various dosages. It is entirely futile to attempt to draw conclusions from a comparison of only two dosages because one half or one third of the dose may be quite as effective as the larger amount used.

We are all familiar with the treatment of pernicious anemia with liver and effective substitutes for use perorally and parenterally and no doubt also with the particular benefits of the use of intramuscular injections of a highly concentrated and uniformly potent liver extract, such as we have had the privilege of using at the Peter Bent Brigham Hospital for more than 4 years. I need not, therefore, attempt to discuss this form of treatment in detail but rather will limit my discussion to a few points which may be of practical value to you.

Inasmuch as liver in some form is a specific means of controlling the important features of pernicious anemia, and because it is necessary to continue adequate treatment indefinitely in order to control all phases, the importance of making a definite diagnosis before treatment is started cannot be too strongly emphasized. Diagnosis may be difficult in some instances before treatment has been carried out, but afterwards it may be quite impossible to make a positive diagnosis

except by allowing the blood to relapse, which is not a desirable thing to do. In addition to the cardinal signs and symptoms, one must consider the prompt and striking increase in the number of reticulocytes following the institution of liver therapy as a most important help in diagnosis. With the possible exception of sprue, there is no other condition in which this phenomenon occurs. In consequence of this, if there does not exist sufficient evidence to make a diagnosis, reticulocyte counts should be made sufficiently often during the ten day period following the institution of known potent liver therapy so that the presence or absence of a rise can be demonstrated.

The value of the reticulocyte-rise has been definitely established as a diagnostic aid when a liver substance of known potency is given to a patient with an anemia of questionable type. In like manner, the importance of this procedure must not be underestimated when used to demonstrate the presence of anti-anemic potency of a substance used in the treatment of a patient known to have pernicious anemia. The use of the determination of the magnitude of the reticulocyte-response as a means of evaluating the relative potency of highly active extracts for parenteral administration cannot be considered logical for reasons which have previously been demonstrated. Perhaps the most important evidence opposed to such a procedure is that comparable reticulocyte-responses may be produced by amounts of material entirely dissimilar as to their content of antianemic potency as judged by the erythrocyte producing power. Tests carried out on this basis will favor the extract of lower potency.

It can hardly be doubted that it is important to recognize the various amounts of potency available in the several substitutes for whole liver, which have been used from time to time. Until it was recognized that potency was lost during the production of peroral liver extract from liver, many patients were treated inadequately. The introduction of liver extracts for parenteral use made possible the administration of definitely controlled amounts of potent substance, thus enabling the physician to control the patient's intake more generally. Perhaps of even greater importance to both the physician

and the patient has been the availability of a concentrated liver extract which is of such uniform and high potency that small amounts of the substance injected intramuscularly will produce rather amazing results. As has been demonstrated previously, the injection of an amount of extract, 9 to 12 c.c. prepared from only 300 to 400 grams of liver, is sufficient to produce a maximal rate of erythrocyte formation and to produce a normal blood level in most instances within a 6 to 7 week interval. The normal state of the blood will be maintained with infrequent injections of 3 c.c. or the amount derived from 100 grams of liver.

After over 4 years of use, the practicability of treatment with a highly concentrated and potent liver extract injected intramuscularly is becoming more and more widely recognized, so that now the trend both in Europe and in this country is toward greater concentration of the material and toward conservation of potency, so that this simple and efficient treatment, which has been such a boon to the patient with pernicious anemia is becoming more and more widely used.

One might naturally expect therapy, which is not only the simplest but also the most efficient type, also to be the most expensive one. Interestingly enough this is not the case, but rather it is the least expensive of all. Compared with ingested whole liver the expense averages slightly less, and the difference in ease of use is tremendous. Liver extracts for peroral use are invariably much more ex-

pensive and generally an inconvenience for the patient. The possibility of infrequent as opposed to frequent injections, necessary with the use of extracts of low concentration or potency, together with the consequent reduction in expense, commends the use of the highly concentrated extract. The encouragement of any system of testing for potency or of treatment which fails to recognize the medicinal and economic benefits to the patient of the more highly concentrated and efficient extract, must be considered as a handicap to progressive medicine.

In closing I wish to emphasize the importance of an adequate intake of liver substance in the control of the disturbance resulting from sclerosis of the posterior and lateral columns of the spinal cord, treatment not only sufficient to maintain the blood in a normal state but also to supply an excess of liver substance. My experience during a ten year period indicates that with such treatment, there is no progression of pre-existing sensory or locomotor difficulties, that these do not begin during such treatment, and that there is improvement of some degree in essentially all cases. The amount of improvement will depend upon the extent and duration of the damage to the cord, but may be as high as 90 to 100 per cent. Although adequate amounts of liver substance in any form will accomplish these results, optimal amounts are best supplied by means of parenteral therapy.

311 BEACON STREET

NEW APPLIANCE TO COMBAT GANGRENE

A new appliance designed to combat gangrene has been installed by the Strong Memorial Hospital in Rochester. It is made by the Taylor Instrument Companies in Rochester, in collaboration with Dr. Louis G. Herrman of Cincinnati, and is the only one in use east of that city. It is called "Pavaex" and consists of a control box and a pair of giant boots made of pyrex glass. The boots come well up over the patient's knees and fit snugly around the thighs with soft rubber cuffs.

The control box houses mechanical and electrical equipment which alternates air pressure with a vacuum. As the vacuum is created, the feet, visible through the transparent glass, appear to increase in size and the veins swell.

When the pressure is applied they return to normal.

The machine has been used in Cincinnati for various leg circulatory troubles. Doctor Herrmann reported "of 14 patients given intensive treatment because of actual beginning gangrene or impending gangrene, all developed sufficient circulation to stop the progress of the gangrene and prevent its appearance in those cases where it was impending."

Harry Frank in his *Working North From Patagonia* gives the information that the doctors in Buenos Aires collect an admission fee at the office door.

CHRONIC APPENDIX SYNDROME

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"Chronic Appendix Syndrome" was purposely selected as a title for this article instead of "Chronic Appendix" because chronic appendix is a term too limited to express the true picture of what the extent of the involvement may be in the lower right quadrant. Aggregate symptoms associated with the morbid process and constituting together the picture of the disease are many and variable. I hope I may be able to present a picture which we have gleaned in the study of these cases over a period of five years.

Let us first consider the anatomy and the nerve supply of the right lower quadrant. There are certain facts which must be taken into consideration in arriving at a correct diagnosis. The first is that the terminal ileum, the cecum, and the appendix are capable of a certain amount of mobility and are normally not fixed in this area. It must be remembered also that the normal appendix is relatively uniform without constrictions and has a patent lumen which should allow the appendix to empty its contents the same as any normal portion of the tract. Semi-solid intestinal contents enter the appendix and may pass a partial obstruction where they lose some of their moisture and are then too solid to pass out the way they entered. They remain and become fecal concretions. Should constriction occur in the appendix these conditions may be intrinsic as from localized constrictions or extrinsic as from angulations due to a shortened mesentery or peritoneal adhesions to the appendix. The result is the same in either case. Not infrequently an appendix lies free of adhesions in the abdominal cavity and is completely and uniformly obliterated. Adhesions and membranes such as a Lane Band or Jackson Membrane have received scant consideration, although they are fully as important in the production of chronic symptoms. We believe some of these bands and membranes are congenital in origin, although a certain percentage are from former inflammatory processes. The cecum may be so involved that it has become completely

fixed. The adhesions may extend up over the terminal ileum to such an extent as to limit its mobility. They rarely cause actual obstruction and the symptoms they set up are doubtless reflex in nature. Their tug on the intestine gives rise to afferent impulses which spread to the sympathetic ganglia and interfere with the normal peristalsis, causing stagnation of the intestinal contents and constipation; or progressing still further set up a spasm in the pylorus, giving rise to gastric disturbances, such as pylorospasm. Adhesions involving the appendix alone can set up such reflex disturbances. The nerve supply in the appendix, cecum, and terminal ileum is both intrinsic and extrinsic. The extrinsic nerves are from the vagus and sympathetic. They carry both afferent and efferent fibers and are chiefly regulatory in their function. The sympathetics pass to the semilunar ganglion which also sends fibers to the stomach. This point must be borne in mind because of the close relationship between the sympathetics on the part of the stomach and the right lower quadrant.

In a recent article on "Abdominal Pain" Alvarez states that

if the present day understanding of a dual sensory nerve supply to some parts of the intestine is correct, the physician when faced by the common problem of chronic pain and soreness limited to the right lower quadrant should absolutely refuse to think of appendicitis and should look more for disease in the peritoneal attachment of the cecum. Theoretically, if smouldering disease in the appendix can produce pain anywhere, it should be felt where it commonly is felt, around the naval or in the epigastrium. Another reason for the radiation of appendiceal pain to the epigastrium may be that the function of the stomach, duodenum, and small bowel is disturbed secondarily to disease in the region of the right iliac region.

This, briefly, is the anatomical and pathological background with which the syndrome of chronic appendix is associated. Because of the varying type and degree of symptoms presented by the mass of patients referring to an indefinite

or vague lesion in the lower right quadrant, we are prone to attach the diagnosis of chronic appendix as a blanket diagnosis, realizing that in a large percentage this will be proven true by removal of the appendix.

In another large group the removal of the appendix *per se* will have had no influence upon the symptoms, and it is this group of cases which directs our attention to the necessity for a thorough investigation of all cases with symptoms which could be referred to as chronic appendix. In the main the symptoms presented by this type of patient have been present over a long period of time. There are periods of remission in the syndrome during which the patient has been perfectly normal. History of an acute attack of pain in the lower right quadrant, which may have been referred to as an acute or sub-acute appendiceal colic, may or may not be given. At some interval and for no apparent cause, or perhaps through some indiscretion in diet, vague gastrointestinal symptoms occur, which cause the patient considerable discomfort but not sufficient for him to consider himself acutely ill. Nevertheless, it is at this stage, probably because the vague and annoying symptoms persist, that he begins to seek medical advice.

Usually there is complaint of epigastric distress two to three hours after meals. This may be characterized by eructations of gas and hyperacidity, and frequently with marked intestinal flatulence, associated with constipation more often than with normal bowel movement or diarrhea. Some loss of weight is associated with these attacks. A nervousness which may be associated with or have preceded the attack is nearly always present. Pain in the right lower quadrant, which is usually among the first symptoms looked for by the physician, is in many instances now absent. Strangely though there may be complaint of discomfort in the right lower quadrant, actual pain is rarely encountered in this region in chronic appendix.

It is at this very point that the close association between chronic appendix syndrome and lesions of the pylorus should be mentioned. We have found that many a patient of the type described has pylorospasm in a mild form, but in many instances after persistency of symptoms ul-

cers actually occur which vary from the slightest mucosal inflammation to ulcers which have penetrated to the muscularis.

In all likelihood, a patient who thus presents himself for advice has previously had reported to him several different diagnoses and has had several kinds of therapy. What has been done may have been efficacious in the past, yet cannot relieve the present condition. It is then our problem to determine what etiological factor is producing this chain of symptoms. There are no exact rules in the approach to the solution. In order to present our concepts as to the method of approach in this type of case, it is necessary to describe what form of procedure we adhere to in these cases. These patients deserve the most careful consideration and a most detailed examination.

First, the physical examination of these patients should start with observation,—such as of the color of the skin, conjunctiva, and the floor of the mouth, also the absence or presence of rash or eruptions, and whether there are scars of previous abdominal operations. Secondly, the mouth should be examined. The color of the mucous membranes must be noted, and the tongue while it is protruded should be examined under an excellent light for change in the surface as to roughness or smoothness or coating. The teeth and gums should be carefully inspected for cavities or pyorrheal pockets to rule out a focus of infection. Pressure should be exerted on the tonsils to see if pus is present; at the same time the cervical region may be palpated for enlarged glands. In the examination of the thorax the chest should be palpated for any transmission of thrill, either from an enlarged aorta, aneurysm, or from increased vocal fremitus. Percussion of the chest should reveal whether there is any dullness at the right base, either as a lung or pleural involvement. Whether or not there are heart murmurs or friction rubs will be detected upon auscultation, and at the same time the chest should be listened to carefully for rales or for any increase in vocal fremitus.

Close abdominal inspection is important in ascertaining the condition as to distension, visible peristaltic waves, the presence of scars of former operations, and dilated skin veins on the abdomen. At first, pal-

pation should be done very lightly, though thoroughly to gain an idea of the general condition of the abdomen. This step, together with percussion, will betray any marked tympany, the presence of fluid, and enlargement of the liver or spleen. After this has been done deep palpation will help confirm the presence of tenderness or pain, enlargement of the liver or spleen, and any other palpable masses. Last but not least is the use of the stethoscope to gain information of the peristaltic activity. Rectal and vaginal examinations should be included to eliminate any possible pelvic pathology. The reflexes should be examined for any fixity of the pupils or absence of abdominal or patella reflexes. A urinalysis with particular reference to pus and blood must be included in the laboratory phase of the examination, having in mind the exclusion of a right ureteral calculus. Moreover, a complete bloodcount would be essential, particularly in betraying an early pernicious anemia with its bearing on a gastrointestinal disturbance. Similarly, a blood Wasserman must be done to obtain any clue that might point to early cord changes which through the central nervous system would give gastrointestinal symptoms.

If in carrying out this examination, symptoms point to a definite gastrointestinal disturbance, and it is apparently certain that these disturbances do not come from cord changes of diabetes, pernicious anemia, cerebrospinal lues or other diseases of the spinal cord, ureteral calculus, or a cystic ovary with a twisted pedicle, we now must verify our diagnosis by the demonstration of visible pathological changes by means of a complete x-ray gastrointestinal examination under the direction of a competent roentgenologist. What is the roentgenologist's definition of a chronic appendix? It is a controversial point which has been tossed to and fro between the clinician, the surgeon, and the roentgenologist for years, and it has not yet been agreed upon. I have searched the literature for a description of the findings in chronic appendicitis upon which a diagnosis of chronic appendix has been based from the radiological standpoint. The following description by a competent roentgenologist most nearly conforms with my own idea in regard to this point:

The diagnosis of pathology involving the appendix by means of roentgenological examination is fraught with danger. The majority of these examinations for appendix pathology are in patients whose symptomatology is vague or because of discomfort on pressure in the lower right quadrant. This comprises the main group, but there is another group in which the symptoms are chiefly gastric in character, yet the findings in a complete gastrointestinal examination indicate definite changes in the appendix and base of the cecum. We do not believe that there is any one finding upon which a diagnosis of chronic pathology of the appendix can be based. The appendix itself may show definite abnormal or pathological changes in the x-ray. Whether or not this is of the clinical type can only be determined by an evaluation of the roentgenological findings with the clinical symptoms. The presence of pathology involving the appendix and base of the cecum may be quite definite but not necessarily of clinical importance. Almost every patient of twenty years and above whose appendix has not been removed has had indefinite gastric or lower right quadrant symptoms at one time or another. If, in the course of a roentgenological examination, some abnormality of the appendix or base of the cecum is observed by the roentgenologist, it is apt to be interpreted in terms of clinical pathology by the physician receiving the report. With these facts in mind it is readily seen how difficult it is to make a diagnosis of clinical pathology in this region.

The x-ray findings which indicate pathology are: (1) Deformity of the base of the cecum, (2) changes in the lumen of the appendix, that is narrowing or dilatation, (3) fixation or angulation of the appendix, (4) retention of barium in the appendix after the barium has passed out of the cecum and ascending colon with or without a catharsis, (5) a fixed point of tenderness over the appendix observed during fluoroscopic manipulation, (6) reflex spasm of the pylorus when pressure is applied over the appendix—this is demonstrated fluoroscopically after the ingestion of barium.

The first four findings are due to morphologic changes involving the appendix and must be considered as such. They show that some pathology has been present. They may or may not be of clinical significance and must be correlated by the clinician with the symptoms displayed by the patient and the history of previous disturbances. The last two findings indicate some current change. Frequently the appendix is not identified filled either with a barium meal or a barium enema. By some observers

this has been considered evidence that the appendix is blocked off. It may mean an obstruction of the lumen of the appendix or the appendix may have filled and been evacuated between the examinations. It may indicate that there is complete obliteration of the lumen from atrophy of the appendix, and hence, of no clinical significance. It cannot be stated definitely which of these conditions has occurred.

Occasionally intestinal parasites are found in the lumen of the appendix, but it is by no means certain that they are the cause of the symptoms. Although not strictly a lesion of chronic appendicitis, mesenteric lymph adenitis should be mentioned. It may be part of a general process from tuberculosis or as a residual from the drainage of a previously infected appendix.

You will readily see our approach in dealing with the chronic appendix syndrome, viz., the correlation of the clinical observations, the laboratory findings, and the visible pathological changes shown in the x-ray examination. If chronic appendicitis is the disease, the cure comes through the removal of the appendix. If it is removed, opportunity should be given the surgeon for a complete and thorough exploration of the right lower quadrant so that not only the removal of the appendix may take place but a correction of any pathology which has occurred in and around the cecum and terminal ileum. It has always seemed to me that a very small incision handicaps the patient as well as the surgeon. It has truthfully been said that the surgeon can tell more accurately the clinical pathology of the appendix region and whether or not it has caused

symptoms than the pathologist can after the appendix has been delivered to him in the laboratory. The pathological reactions and the developmental anomalies in the adjacent tissues seem to us to be more responsible for the symptoms than the histological changes in the appendix. It has frequently been said that the pathological diagnosis of chronic appendix cannot be made truthfully. If that is taken to mean that such a diagnosis cannot be made on the histological evidence alone, there is much in the statement. It is usually impossible to differentiate the scar resulting from the previous inflammation from the fibrosis of normal atrophy. The presence of a few mononuclear wandering cells, plasma cells, or even occasional polymorphonuclear leukocytes has never seemed to me to be of much significance.

This then summarizes briefly our understanding of chronic appendix syndrome. The very chronicity of these cases makes it apparent that surgical haste should be tempered with judgment. There is no case encountered that requires more careful and detailed study and observation. It should be explained to these patients that the medical as well as the surgical treatment is important because they will require medical treatment both pre- and postoperatively. The promise of immediate cure by the removal of the appendix alone is far from true. A year may elapse before the complete disappearance of the symptoms even when the chronic appendix syndrome has been dealt with in a most efficient and careful manner.

FIFTH AVENUE HOSPITAL

DISTURBING WASSERMANN TEST DATA

Distinctly useful work has been found for some of the clerical workers on relief in Georgia by setting them to sorting and tabulating the mass of reports on file at the State Health Department relating to Wassermann tests during the years 1929-33. The findings are rather disturbing, and make one wonder what a similar investigation might reveal in other states, nearer home. There were over 200,000 reports in the accumulation, 136,000 of them stating the occupation of the patient. Running the eye down the resulting table, it appears that 10 per cent of the barbers and 31 per

cent of the manicurists examined showed positive reactions, not a very reassuring thought, while 30 per cent of all food-handlers examined, and 41 per cent of the cooks, revealed a like condition, which is still less conducive to peace of mind. Hospital attendants curiously show the same percentage as prisoners, 36, while nursemaids go one better, at 37. It must be remembered that the figures do not cover all the workers in these occupations, but only those examined, who may have been under suspicion, and the figures for all workers might be much lower.

PULMONARY ABSCESS

With Special Reference to Packing Treatment of Connors

THOMAS CIACCIO CASE, M.D., *New York City*

In the writings of Morgagni, of Van Swieten, and of Stoll one finds descriptions of cases of pulmonary abscess and gangrene. Boyle, however, first really published a description of the condition, he called it "Pulmonary Ulceration."

In 1818 Laennec described the pathological anatomy and clinical findings. He was the first to recognize pulmonary abscess as an entity among pulmonary diseases, but regarded it as an extremely rare lesion.

Later, men like Virchow and Fischer in attempting to clarify the nature of the disease found parasites in the gangrenous areas of the lung tissue, Traube and Detrick claimed that the putrefaction was due to a chemical property of the purulent debris which was stagnant in the bronchi. Leyden and Jaffee in 1866 called this offending parasite "*Lepothrix Pulmonatis*" and they thought it a variety of "*Lepothrix Buccalis*."

In 1875 Bucquoy described a pleuritic form, then in 1883 Landier published his work on pulmonary gangrene which complicated certain chronic affections of lungs and bronchi. Pasteur's work on putrefaction somewhat cleared the subject and he stated at the time, that putrefaction was brought about by the action of anaerobes. This contention was further supported by work of Veillon, Hallé, and others who found several species of anaerobes in the gangrene areas.

No form of treatment had been instituted until about 1897 when Skoda attempted to disinfect the gangrenous areas by inhalation of creosote. Later subcutaneous injections of eucalyptus were tried, but the treatment was mainly palliative and symptomatic in that it was simply attempted to alleviate the fetid odor and sputum, without regard for any effort being made to attack the gangrenous focus.

In 1875 Gluck, Mosier and Schmidt started to do research work on resection of ribs and in 1897 Tuffier first published his classical report on the indications and operative technic for pulmonary abscess and gangrene. Later, McKulitz (1905)

published many papers and statistics on the value of surgical treatment of lung abscess and in 1910 Picot reported on the accepted technic for the thoractomy as used today.

Artificial pneumothorax was advocated by Forlanini in 1918, but did not seem to have been accorded universal acceptance. There has been little progress made in operative technic, the best existing method being the two stage one for approaching the abscess with tube drainage.

In 1926 Dr. John F. Connors at the Harlem Hospital, New York City, first employed the method of tight packing for lung abscess. The first case operated upon was packed, not therapeutically, but for excessive bleeding and the packing was removed three days later, to reveal, much to his surprise, a clean granulating wound. Since then the method has been gradually perfected and all lung abscesses are now done when possible in one stage and packed with iodoform gauze at the Harlem Hospital.

Etiology

The predisposing causes of pulmonary abscess are (1) Lowered general resistance, (2) impairment or inhibition of the local defense mechanism, i.e., trauma or conditions which inhibit the activity of the cough reflex (anesthesia or coma) and the cilia of the trachea or bronchial mucosa (chronic bronchitis?), and (3) the presence of sufficient number of pathogenic organisms capable of producing suppuration.

The recognized causes in their apparent order of frequency briefly are:

(1) *Aspiration of Infection*. This seems by far the most frequent cause and statistics show that about 41 per cent of pulmonary abscesses develop following operative procedures and that about 80 per cent of the operative procedures were about the upper respiratory tract (Sixty per cent tonsils and teeth extractions). However, while aspiration of infective materials at tonsillectomy does occur yet as pointed out by Fetterolf, it is a mistake to regard this as the only or even necessarily the most frequent route. Lymphatic and blood vessels

are direct and potential channels of transmission from an infected and lacerated tonsil bed. Some of these postoperative pulmonary abscesses are undoubtedly of embolic origin.

(2) *Pneumonia*. Twenty-one per cent gave history of pneumonia from the start. Pulmonary abscess seems to be a relatively uncommon complication of lobar pneumonia, Hartwell at Rockefeller Hospital reporting only two cases out of 700 consecutive patients with pneumococcus lobar pneumonia. The relative frequency of abscess following bronchopneumonia is also uncertain, the cases probably being those of lung abscesses from the beginning and not recognized because of the difficulty in differentiating the pneumonitis concomitant with the early abscess and a pneumonic patch.

(3) *Embolic Origin*. Embolic abscesses may result from a pyemia or from infected thrombi originating in a thrombophlebitis, puerperal sepsis, or ulcerative endocarditis (3.9 per cent).

(4) *Extension of Infection* (3.6 per cent). An abscess underneath the diaphragm, such as in the liver, by perforating into the pleura of lung or by lymphatic extension may produce a secondary pulmonary abscess. At this point it should be mentioned that it is quite probable that lymphatic extension from foci of infection about the mouth is perhaps the cause for many of the lung abscesses which are erroneously diagnosed primarily as pneumonias or those in which the etiology is undeterminate. The high incidence of lung abscess in the mid-period of life is probably due to the fact that at that time we find dental infections most common. Children rarely have pyorrhoea of infected teeth, hence the low incidence of the disease in the first decade.

(5) *Trauma*. Blunt trauma from a blow, fall, or crushing injury may result in actual rupture of lung or more commonly in an interstitial ecchymosis and edema followed by pneumonitis and liquefaction with infection of the injured portion of the lung. Abscess following penetrating injury to the lung, such as stab wound, is due to devitalizing trauma to the tissue, but the infection may result in abscess long after the injury has healed. There are, however, very few of these because of the operative procedure followed in many of the stab wounds of the chest.

(6) *Specific Infections*. Under this heading are represented rare types of

infection producing pulmonary abscess, e.g., actinomycosis and infected echinococcus cyst.

Pathology

The pathology is of course determined in part by the avenue of infection, the type of infective organism, tissue resistance, and the duration of the lesion. Acute abscess may or may not be solitary, is usually spherical, miliary in size of up to 12 cm. or even more in diameter. The surrounding lung tissue may or may not show fibrosis early, the abscess cavity being recognized with certainty only by a fluid level. In other cases extensive pneumonitis is the outstanding characteristic in the roentgenogram. At this time two points should be stressed about the pathology, which are of paramount importance from the surgical aspect and those are: (1) Practically all lung abscesses are peripheral; (2) the pleura is involved and adhesions formed between the visceral and parietal pleura because of this fact. If the abscess is situated centrally, between lobes it is still peripheral, i.e., at the periphery of that particular lobe and in these cases the pleura may or may not be involved, but these cases are in the minority. These observations were noted by Tuffier in 1897 and have been corroborated by workers in New York City recently, e.g., Rabin at the Mt. Sinai Hospital.

The chronic abscesses are usually relatively large. The surrounding fibrosis varies in amount and extent and bronchiectatic changes in the communicating bronchi are often present. The longer the duration of the abscess the more fibrosis present and therefore this makes it much more difficult to heal when attempting to obtain a cure.

Diagnosis

In attempting a diagnosis it must be remembered that the history is of paramount importance. The diagnosis of pulmonary abscess rests on the determination of the etiology of the symptoms and signs and on the exclusion of other conditions giving rise to a similar clinical picture. The symptoms, of course, vary with the type and virulence of the infection, pathology present, patient's resistance and duration of the disease. In the prodromal

state, before the sputum becomes of characteristic odor, there are usually present malaise, chilliness and fever, with some increase in respiratory rate. After the abscess has been formed, cough with purulent foul sputum is the outstanding syndrome with associated symptoms of infection in varying degree. Foul sputum is more characteristic of abscess than of any of the conditions with which it may be confused. Hemoptysis may be an initial symptom.

Physical findings if present, are those of consolidation and cavity formation. An abscess that has not ruptured into a bronchus will show the signs of consolidation. Cavity signs occur only after the abscess has emptied itself in whole or in part by perforating a bronchus.

In chronic abscess the symptoms vary greatly in their combinations and severity according to the extent of involvement, degree of absorption, and the presence or absence of complications.

It is often difficult to differentiate an encapsulated interlobar empyema, from a pulmonary abscess or abscess with secondary empyema. However, if a very careful history is obtained and a careful study of the x-ray made (i.e., sharp localization of interlobar septa of empyema and presence of fluid level in abscess) and the character of the sputum noted, the differentiation should not be very difficult.

In attempting to localize the abscess, bearing in mind always that it is peripheral, the most important aids are (1) X-ray, and (2) physical signs. The x-ray will usually demonstrate the presence of a localized area of pneumonitis and often the presence of a cavity with air and a fluid level. The importance of obtaining lateral views of the suspected lung cannot be too strongly stressed. On palpating the suspected area usually the center of the area of flatness is chosen and often this area is found to be tender to palpation because of the presence of pleural adhesions.

Bronchoscopy and lipiodal injections are also resorted to, but not frequently. The bronchoscope is always used in cases where the presence of a foreign body in a bronchus is suspected.

Diagnostic aspiration through the intact chest wall cannot be too strongly

condemned. It may lead to false conclusions and to serious, if not fatal, complications, i.e., infection of clean pleural cavity or chest wall phlegmon.

Treatment

The principal objection to surgical treatment per se is the high mortality attending its performance, but very likely this is apt to be exaggerated as a consequence of the treatment. Too, it is apt not to be remembered that the disease itself is a serious one and that most patients have thoractomy performed many months after the onset of the abscess.

Some cases of lung abscess are cured by postural drainage. Bronchoscopic aspiration has proved its worth. When it is obvious that these cases are not cured spontaneously or by the use of the bronchoscope, they should be submitted for surgical intervention and at not too late a date. Even in the hands of a competent bronchoscopist the most that can be obtained is aspiration and washing out of the cavity, however, he cannot collapse the cavity, nor can he establish complete and adequate aeration and drainage of the cavity, both of which are quite necessary in order to effect a cure. (Bacterial anaerobes.) One must also keep in mind the possibility of spilling the fluid contents of the abscess into another part of the lung during the operation.

Collapse therapy, (i.e., the production of pneumothorax) is dangerous therapeutic procedure that should be avoided in all but unusual cases (Bleeding or central abscess). In the majority of cases the pulmonary infection extends to the periphery of the lung, in which instance adhesions between visceral and parietal pleura occur early. These adhesions not only interfere with an optimum collapse of the lung, but any tension on them is likely to tear the underlying necrotic lung, resulting in the production of a severe empyema, then again the presence of fibrous tissue about the abscess usually prevents the collapse of the cavity and it often happens that the mouth of the cavity becomes closed, causing retention of cavity contents and the condition becomes aggravated. (Used once in bleeding of abscess.) Therefore surgery is resorted to (thoractomy and packing) as the method of choice for treating lung

abscess, which method conforms to the fundamental requirements of complete and adequate drainage. The best time to operate unless untoward complications arise in the interim, is about six weeks after onset of the disease; (1) because within that time the patient will have been given the opportunity to heal spontaneously (10 per cent get well), (2) sufficient pleural adhesions will have been

saline is started before the operation and continued throughout the operative procedure. The patient is placed in a position most suitable for the approach to the abscess cavity. The incision, 3 or 4 inches long, is made in the direction and over the rib which crosses the center of the area of flatness. About 2 inches of the rib is resected subperiosteally and the underlying tissue is palpated and in-

Fig. 2. Incision in endothoracic fascia.

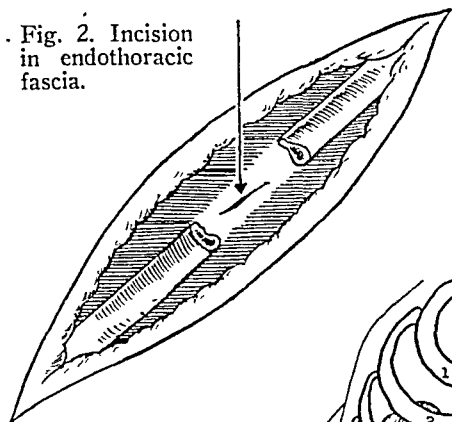


Fig. 4. Groove director in same opening of needle, then opening gradually enlarged and finger introduced to determine extent of cavity.

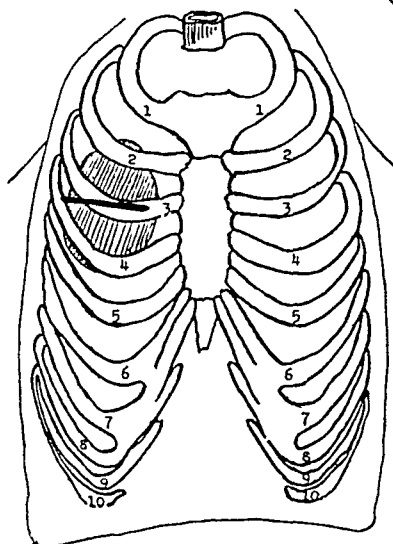
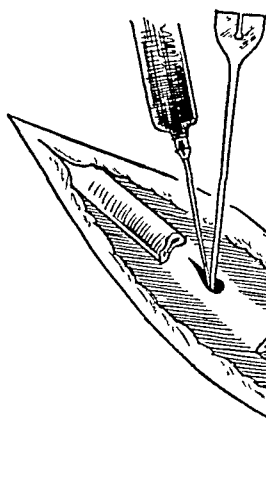


Fig. 1. Incision over rib that crosses center of area of dullness. 3rd rib R.

Fig. 3. Aspiration of cavity may obtain: (1) Pus (febid), (2) Air with foul odor.

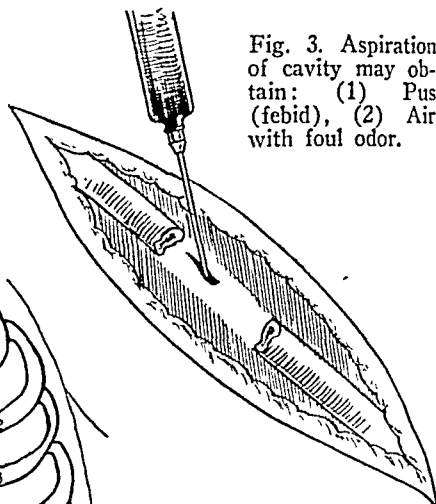
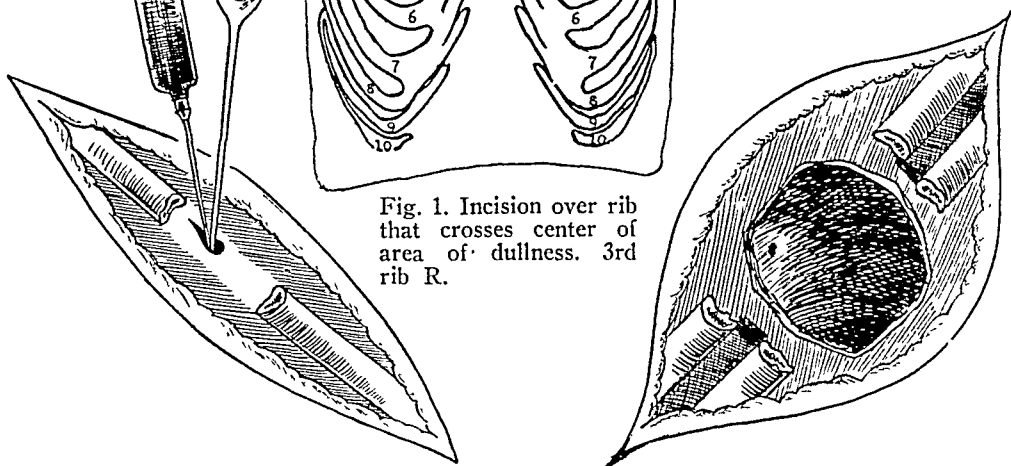


Fig. 5. Two ribs resected and cavity adequately exposed, then packed tightly.



formed, (3) in case of longer delay the infection may become overwhelming to the patient or other pathologic changes incident to a prolonged suppurative process might develop.

Procedure

The patient is anesthetized by using avertin and ether, and an infusion of

spectated. If the tissue feels indurated and there is no movement of the lung with the respiratory movements it is fairly certain the abscess is underneath, in which case the one-stage operation can be carried out. If there is doubt, the endothoracic fascia is carefully incised with a sharp knife and observation is thus then made certain. If the free

pleural cavity is opened at this point packing is inserted and a secondary operation performed at a later date (one week)

If the localization is correct then an aspirating needle is inserted into the cavity, putrid pus or foul air may be obtained, and a groove director is plunged in alongside of the needle. The opening is gradually enlarged until it admits the examining finger in order to palpate the extent of the pathology. If the cavity extends upward, part of the rib above is removed, or if it extends downward the same is done below so that adequate drainage is obtained. The intercostal muscles together with the intercostal vessels are ligated on either side and removed *en masse* in order to make the approach clear. If adhesions forming communicating intrapulmonary cavities exist, they are broken down in order to form one cavity. The cavity is then sponged until clean and iodoform gauze is packed into it rather firmly. The skin wound is laid wide open with packing and wound edges protected with vaselined gauze and a dry dressing placed over both.

If during the operation the clean pleural cavity should be opened accidentally the abscess cavity is packed with the iodoform gauze and the entire pleural cavity is picked off with plain gauze.

Postoperative Care

Fluids are forced and given by clysis if necessary. The patient is maintained on a high caloric diet, including whiskey, particularly to those who are habitual drinkers. Transfusions have been used freely, particularly in the cases which showed varying degrees of collapse. The patient is propped up in bed and is encouraged to get out of bed as soon as his condition allows and to move about and get out of doors when the weather is favorable. The packing is removed in 3 to 5 days, although most commonly on the fourth day, the abscess cavity then presenting a clean and even elastic appearance with the bronchial openings clearly in view.

The initial tight packing breaks down the abscess cavity membrane containing bacteria, pus, and fibrinous exudate. After the first dressing the abscess cavity is again packed but not as firmly as the

initial packing. This is repeated every other day and the wound allowed to granulate from below upwards.

After the cavity has been cleaned and healthy granulation tissue formed the large open wound is no longer necessary. It is allowed to close but not too quickly for quite often it may be necessary to relieve retention of toxic products and in order to prevent this and to get adequate drainage the opening should be about a half inch in diameter.

The orifice should be maintained open for a period of at least 4 months and then allowed to close only after an x-ray check up and the general condition of patient indicate certain cure.

The advantages of the packing method for lung abscess are many as Dr. Connors showed in 1931.

1 The abscess cavity is cleared early, within 3 days, and can be maintained as such until a cure is obtained.

2 Postoperative care is facilitated, i.e., frequent dressings are not necessary, and close attention to details is obviated.

3 Introduction of tubes is not necessary, therefore a source of pleural irritation is removed, and the possibility of osteomyelitis of ribs obviated.

4 The large thoractomy wound permits perfect inspection of the pathology and operative field.

Summary

1 Treatment of acute lung abscess is preferably surgical. It should provide early, complete, and adequate drainage of the abscess, the Connors method of packing conforming to these underlying principles.

2 With proper co-operation of x-ray and internist the one stage operation is most often possible and is the procedure of choice.

3 An atypical pneumonia should make one suspicious of beginning pulmonary abscess if the history is at all suggestive.

4 It is quite probable that lymphatic extension from foci of infection in the mouth is perhaps the etiology of many lung abscesses erroneously diagnosed primarily as pneumonias or those in which the etiology is undetermined.

NEW YORK STATE JOURNAL OF MEDICINE

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EDITORIALS

A Retrogressive Trend

Since the war the annual matriculation at medical colleges has shown a progressive increase which threatens to undermine the important reforms accomplished by the Council on Medical Education of the A.M.A. From 18,200 in 1925, the number of medical students has grown to close to twenty-three thousand in 1935. This figure is not far removed from the enormous enrollments of the early part of the century.

An increase on this scale, which is not justified by any public need, must inevitably entail an impairment of the standards of medical education. Matriculates are chosen with less discrimination and the student body falls short of the scholastic and personal level achieved by more restricted admissions. Fortunately, the number of schools has not kept pace with the growing matriculation and the colleges in existence are, on the whole, superior institutions; but their facilities are not equal to the sharp rise in enrollments.

Besides threatening the quality of practice, the increasing registration at medical colleges has serious economic implications. The nation already has more physicians than it needs or is able to support. To pour an ever mounting number of recruits into a field that is already overcrowded, is to destroy the prospects of

the new-comers as well as jeopardize those already established.

The root of the situation is of course economic. With a general drop in income from endowments and gifts, the schools are almost completely dependent on tuition fees. More pupils mean more money and standards of admission are sacrificed to financial stress. A permanent solution will not be found until the accredited medical schools of the country are placed on a stable financial basis and relieved of their dependence on student income.

Spread of Common Sense

The organized profession in this state has grounds for strong satisfaction in the way some of its major economic principles have taken root in the past year. The organization of approved panels for workmen's compensation work, from which the patient may freely select his own advisers, represents the triumph of a medico-economic formula long advocated by physicians. Plans are now under way in a number of cities to use these same panels for home medical relief and professional service under various other projects.

In New York and many other municipalities in which both project physicians and the principle of home medical week have been tried, the latter arrangement

has definitely demonstrated its superiority. It is efficient, economical and approximates the normal American mode of life. In addition, it makes every dollar for medical relief do full duty by distributing available funds among the profession as a whole instead of a few favored practitioners.

The creation of the approved panels required under the Workmen's Compensation Act was an enormous task. Now that they are ready for use, there is no reason why they should not be employed for other undertakings in which the patient does not bear the financial responsibility for medical care. The examination of needy school children, the inspection of food handlers, the treatment of the indigent sick, the administration of preventive measures, can all be accomplished economically and well by certified private practitioners. Physicians and professional societies in every community should do their utmost to secure the application of this principle to appropriate medical programs.

Immunity Against Influenza?

By combining the public health control of communicable diseases with the more specific measures aimed at conferring active immunity upon susceptible individuals many of the epidemic diseases have been shorn of their morbid propensities. The incidence and gravity of diphtheria, typhoid fever and small pox have been reduced to a minimum by the precautionary measures of vaccination and preventive inoculation. The prevention of scarlet fever by immunization is still a problem for solution, since approximately ten per cent of those immunized will show a positive Dick reaction within one year. The committee appointed by the British Medical Association to investigate the efficacy of the various agents utilized for the purpose of immunization recommends the reservation of the latter procedure for compact groups of children wherein a case of scarlatina has developed and for hospital workers who are in contact with this disease. As regards

measles, all that can be hoped for at present is the establishment of a passive immunity by the injection of convalescent blood or serum.

For limiting the spread of epidemic encephalitis lethargica, poliomyelitis and the dread Spanish influenza, we have had to depend until now upon the strict enforcement of public health measures. Nevertheless, the epidemiology is contributing step by step toward eventual elimination of these ailments as a menace to community life. Laidlaw, Smith, Andrewes, and Dunkin¹ have recently reported their success in obtaining a potent anti-influenzal serum by hyperimmunizing horses with emulsions of virus obtained from ferrets infected with this disease. Not only does this serum confer certain degree of passive immunity to mice, but it also exhibits a decided therapeutic value in mice already infected. Prof. W. C. Topley² ventures to predict that the day is not far off when immunization of the human against influenza will become a reality. The transitional period between the experimental aspect of a medical problem to the stage where the new knowledge can be utilized practically, is always a long interval. However, the intense scrutiny with which science studies every new advance, before the general public is appraised of its worth and permitted to utilize it, is a necessary precaution for the protection of the public. This first step toward immunization against influenza deserves notation.

Cardiac Surgery

During the development of surgery as a means to cure disease it was only natural that the most rapid advances should be made, first, in the removal of structures whose usefulness had been destroyed and whose continued presence

¹ Laidlaw P. P. Smith W. Andrewes C. H. and Dunkin G. W. Influenza: preparation of immune serum in horses and Influenza experiments on immunization of ferrets and mice. *Brit. J. Exper. Pathol.* vol. 16 p. 275 and 291 June 1935.

² *J. A. M. A.* p. 608 vol. 105 Aug. 24 1935.

in the body threatened life. Later, refinements were devised for the repair of structures to establish their return to normal function. The field of surgery has been enlarged enormously by the rapid additions of new scientific discoveries until now it has reached a stage where it may be employed to treat virtually every organ in the body.

It has exceeded even its own bounds, since many diseases, formerly wholly in the therapeutic domain of the internist, have been conquered by the progress of surgery. The heart alone seemed to have escaped the zest of this surgical advance. The interior of the heart could not be attacked without extreme danger to life and the cardiac musculature with its terminal blood supply appeared as barren territory not worthy of surgical endeavor.

Nevertheless, it appears as if this very hopelessness has served as a stimulant rather than a deterrent to investigation. In the recent issue of *Surgery, Gynecology and Obstetrics*,¹ Beck briefly outlined the remarkable work that he and his associates are performing. They have succeeded in bringing a new blood supply to the heart muscle and have been able to

keep the musculature viable and the animal alive after occlusion of both coronary arteries. The injection of dyestuff into the surgically constructed extracardiac vascular bed found its way into the myocardium which became diffusely stained.

They have likewise operated upon four patients suffering from coronary occlusion with distinct beneficial results in three of the cases; the fourth died from another cause. It might seem at first that a report based upon so small a number of cases should not be commented upon by us, but the reason for our comment is best explained by Beck's own statement. "It was my desire to withhold presenting this work until the results of the operation as applied to patients were definitely known. Unfortunately, this was not possible. The operation is not without hazard and it is my sincere hope that surgeons will not accept and apply this operation to human patients until the results are known." With this conservatism we are in accord, yet the potentialities which both the laboratory work and the clinical material furnish, point a pathway whose direction is distinctly toward a new horizon in cardiac surgery.

¹ Beck, C. S.: A new blood supply to the heart by operation. S. G. and O., Sept., 1935.

NEW YORK ACADEMY OF MEDICINE ANNOUNCES LECTURES TO LAITY FIRST SERIES

October 3, 1935–May 14, 1936

October 3, 1935

Walter B. Cannon: *Wisdom of the Body*.

November 14, 1935

Howard W. Haggard: *Medicine in the Days of the Great Monarch*.

December 12, 1935

Alexis Carrel: *The Mystery of Death*.

January 9, 1936

Harlow Brooks: *Medicine of the American Indian*.

February 13, 1936

Benjamin P. Watson: *How We Learned About the Human Body*.

March 12, 1936

Foster Kennedy: *The Organic Background of Mind*.

April 9, 1936

Elmer V. McCollum: *The Story of Vitamins*.

May 14, 1936

George Draper: *Man—The Common Denominator of Disease*.

Hosack Hall, 2 East 103rd Street, 8:15 P.M.

The profession and the public are invited to attend.

MEDICAL RADIO BROADCAST

The Medical Information Bureau of the New York Academy of Medicine announces the following radio addresses to be broadcast from Station WABC and the Columbia Broadcasting System network:

Thursday, October 3, 1935, 1:15 P.M.
Speaker: Dr. Shepard Krech, Assistant Visiting Surgeon, Bellevue Hospital. Subject: Appendicitis.

Society Activities

Workmen's Compensation Committee

In answer to a query from the Chairman of the Compensation Board of one of the County Societies, the following letter was sent. Attention of all County Societies is called to this description of the basis on which "qualifications" can rest.

September 9, 1935

Dear Doctor ———:

I am answering your letter of August 28th in the absence of Dr. Heyd, who is still away on vacation.

In general, it should be the purpose of the various county societies, or their compensation boards, to qualify physicians in accordance with their education, training and experience. It would seem that nobody is as able to pass on a man's qualifications as his fellow practitioners in the community in which he practices. Judging by your letter, it would seem to me that Dr. ——— has been properly qualified by you. It is manifestly impossible to designate every possible specialty in which an individual has had some experience. The designation X (general practitioner) is all inclusive. It is taken for granted that a well trained practitioner has had more or less experience in the various specialties, but he should only be designated as having had special experience in a given specialty, and a letter in that specialty given to him, when it is recognized that he has had more experience than the average practitioner in his locality in that particular branch. For example, a general practitioner may possess physical therapy and even x-ray apparatus. The mere fact of possession, or some knowledge of the use of such apparatus, does not justify designating the individual with the special letters for Roentgenology or for Physical Therapy. If these letters are given to him, they should imply, as they indicate, that the possessor has had both training and experience in these fields beyond that possessed by the average practitioner in his community. The fact that the X man is not designated as, for example, M (1) Physical Therapy—in no way limits him in the use of physical therapeutic agencies on his own patients.

It seems that Dr. ——— has had special training in roentgenology and in physical therapy, as indicated by his memberships in special societies, and his own statement regarding his range of practice in these fields. In regard to his request to be listed under A and B, which letters would indicate that he is both a surgeon and an orthopedic surgeon, the mere fact that the doctor occasionally treats a surgical or orthopedic case, does not justify the Qualifying Committee of the County Society in designating him as especially qualified in surgery and orthopedics unless, in their judgment, his training and practice warrant it. Nobody is in a better position to elucidate this point than your Board.

As you know, the Industrial Council, the Commissioner of Labor, and the members of this Board are desirous of simplifying the designations as far as possible. When a specialist or physician insists upon numerous designations he actually confers upon himself the status of a general practitioner because it is unlikely that a man is especially skilled in numerous branches or has the necessary contacts in these numerous fields, to warrant numerous special designations. There should be a sharp distinction between a man in general practice with a major activity in one or two specialties, and those specialists who confine their practice to a limited field. It is unnecessary to give to the average general practitioner the designation of every branch in which he has had some experience and treats an occasional case, because under the law it is taken for granted that a general practitioner may do what his experience (and conscience) dictates without giving him a large number of designations. On the other hand, a specialist should, so far as possible, limit himself to his specialty because in general it is this restriction of work which implies and indicates that he possesses special qualification, skill, and experience. Of course here, too, preliminary training, experience and local custom must be taken into consideration in awarding the letter of a specialty.

I may say in general, that different communities must necessarily have different standards for the designation of specialties. For example, in New York County, most of the general surgeons, who undoubtedly occasionally see an orthopedic case, have not been awarded the special designation "B" unless their training and hospital connections are such as would indicate active association with special orthopedic work, and vice versa. This is eminently fair, because the well trained general surgeon is considered competent to treat the average surgical condition without the designation "B," and does not ordinarily, or usually, treat such orthopedic surgical conditions as require the special knowledge and technical skill of the orthopedic surgeon. Conditions in a smaller community may well require the general surgeon to embrace both fields in his work, and if in such community a general surgeon actually takes care of orthopedic cases in his routine practice, and especially in his hospital practice, he should be given both A and B designations.

Conditions differ in smaller counties where the number of especially trained physicians is limited, and the range of specialties is also limited. It is quite conceivable that in a smaller county a surgeon or general practitioner may have a major activity in, say Roentgenology or Physical Therapy; and if properly equipped to do this work, should be given the special designation on the basis of his training and experience, and the absence of a specialist to render this service to the community.

I hope I have made myself clear on a rather difficult subject. In closing, I may say that it is my belief that the local Board of the County Society, especially if advised by a special qualifying committee consisting of physicians in the

various branches of medicine, is the best agent to qualify the physicians of its own community and do justice to all concerned.

Sincerely yours,

DAVID J. KALISKI, M.D.

District Branch Meetings

First District Branch Program

HOTEL PENNSYLVANIA
THIRTY-THIRD ST. & SEVENTH AVE.
NEW YORK CITY

Tuesday, October 8, 1935

BUFFET LUNCHEON 1:30 P.M.

Address: Frederic E. Sondern, M.D.,
President of the Medical Society of the
State of New York.

Address: Daniel S. Dougherty, M.D.,
Secretary of the Medical Society of the
State of New York.

AFTERNOON SESSION

1. "Some Phases of Traumatic Surgery." John J. Moorhead, M.D., New York City.
2. "Hand Destruction and Construction." Hugh Auchincloss, M.D., New York City.
3. "Some Dermatoses, Their Origin and Treatment." George Miller MacKee, M.D., New York City.
4. "Vertebral and Associated Spinal Cord Injuries, Their Management and Treatment." Byron Stookey, M.D., New York City.

DINNER 7:30 P.M.

Mr. Upton Close will be the speaker of the evening and will discuss world affairs under the caption "Yellow, Black and White."

Eighth District Branch Program

AMERICAN LEGION HALL
WARSAW, N. Y.

Thursday, October 3, 1935

MORNING SESSION 10:00 A.M.

"Experiences with Medical Relief under the T.E.R.A." H. Jackson Davis, M.D., Dr. P.H., Director of Medical Care, T.E.R.A., Consultant in Medical Care, P.W.A. General Discussion.

LUNCHEON 12:00

Election of Officers. Business Session.

Address: Frederic E. Sondern, M.D.,
President of the Medical Society of the
State of New York.

AFTERNOON SESSION 2:00 P.M.

1. "The Management of Arthritis." Howard K. Thompson, B.S., M.D., Lecturer on Arthritis, Tufts Medical School, Visiting Physician to the Robert B. Brigham Hospital, Visiting Physician to the Boston City Hospital Arthritis Clinic. Discussion by Carroll J. Roberts, M.D., Professor of Medicine, University of Buffalo Medical School.

2. "Peripheral Vascular Disease." (Illustrated with lantern slides.) G. deTakats, M.D., M.S., F.A.C.S., Chicago. Peripheral Circulatory Clinic, Northwestern University. Discussion by L. Maxwell Lockie, B.S., M.D., Buffalo.

INTER-STATE POSTGRADUATE MEDICAL ASSOCIATION OF NORTH AMERICA

The International Assembly of the Inter-State Postgraduate Medical Association of North America will be held in the beautiful Masonic Temple, Detroit, Michigan, October 14, 15, 16, 17 and 18, 1935, with pre-assembly clinics on Saturday, October 12 and post-assembly clinics Saturday, October 19, in the Detroit hospitals.

The Association through its officers and members of the program committee extends a very cordial invitation to all physicians in good standing in their State and Provincial Medical Societies to attend the Assembly. An unusual clinical and didactic program including all branches of medicine and surgery and the specialties has been arranged by the program committee.

In cooperation with the Wayne County

Medical Society and the Michigan State Medical Society and with the active support of the Detroit Convention and Tourist Bureau and the Detroit Board of Commerce, a most excellent opportunity for an intensive week of postgraduate medical instruction is offered by a very large group of acknowledged leaders in the profession.

Registration fee of \$5.00 admits all members of the profession in good standing.

DR. CHARLES H. MAYO,
President, ROCHESTER, MINN.

DR. GEORGE CRILE,
Chairman Program Committee,
CLEVELAND, OHIO

DR. WILLIAM B. PECK,
Managing-Director,
FREEPORT, ILL.

PROGRAM

International Assembly of the Inter-State Post
Graduate Medical Association of
North America

Detroit, Michigan

October 14, 15, 16, 17 and 18, 1935

MONDAY, OCTOBER 14TH, 8 00 A M

Diagnostic Clinic 'Anemia' Dr Cyrus C Sturges, Professor of Internal Medicine, University of Michigan Medical School Ann Arbor, Michigan

Diagnostic Clinic 'Peptic Ulcer' Dr Donald C Balfour, Professor of Surgery, University of Minnesota Graduate School of Medicine Rochester, Minn

Diagnostic Clinic 'Types of Oedema and their Treatment' Dr Henry A Christian Hersey Professor of the Theory and Practice of Physics Harvard University Medical School Boston, Mass

INTERMISSION FOR REVIEW OF EXHIBITS

Diagnostic Clinic 'Factors Influencing the Healing of Fractures' Dr William Darrach Bern Emeritus and Professor of Clinical Surgery, Columbia University College of Physicians and Surgeons New York, N Y

Address 'Pneumonias of Childhood' Dr Charles H Smith, Professor of Pediatrics, University and Bellevue Hospital Medical College, New York, N Y

NOON INTERMISSION

Diagnostic Clinic 'Headache' Dr Elliott C Cutler, Moseley Professor of Surgery, Harvard University Medical School, Boston, Mass

Address 'Plastic Operations on the Lower Urinary Tract for Congenital Deformities' Dr Hugh H Young, Professor of Urology, Johns Hopkins University School of Medicine and Director of the Brady Urological Institute, Johns Hopkins Hospital, Baltimore, Md

Address 'Lead Poisoning in Children' Dr Harold B Cushing, Clinical Professor of Pediatrics, McGill University Faculty of Medicine, Montreal, Canada

INTERMISSION FOR REVIEW OF EXHIBITS

Address 'Hyperplastic Tuberculosis of the Large Bowel its Diagnosis Treatment and Prognosis' Dr Fred W Rankin, Lexington, Kentucky

Address 'Diagnosis and Treatment of Diseases of the Esophagus' Dr Gabriel Tucker, Professor of Bronchology and Laryngological Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa

Address 'Indications for and Advantages of Vaginal Hysterectomy' Dr Alexander W Blain, Professor of Surgery, Wayne University College of Medicine, Detroit, Michigan

MIDNIGHT INTERMISSION

Address 'Thoracic Surgery' Dr George J Heuer, Professor of Surgery, Cornell University Medical College New York, N Y

Address 'A Critical Estimate of the Value of Laboratory Procedures in Disorders of Metabolism' Dr John P Peters, John Slade Ely, Professor of Medicine, Yale University School of Medicine, New Haven, Conn

Address 'Tendon Transplantation in the Lower Extremity' Dr Frank R Ober, Assistant Dean, Harvard Medical School, Course for Graduates, Clinical Professor Orthopedic Surgery, Harvard University Medical School, Boston, Mass

Address 'Hyperthyroidism in Patients over Fifty Years of Age' Dr Charles A Elliott, Professor of Medicine, Northwestern University Medical School, Chicago, Illinois

TUESDAY, OCTOBER 15TH, 8 00 A M

Diagnostic Clinic 'Tuberculosis' Dr James A Miller, Professor of Clinical Medicine, Columbia University College of Physicians and Surgeons New York, N Y

Diagnostic Clinic 'The Prostate Gland' Dr William E Tower, Cleveland Clinic Cleveland, Ohio

Diagnostic Clinic 'Chronic Arthritis' Dr Russell L Cecil, Professor of Clinical Medicine, Cornell University Medical College, Professor of Internal Medicine, New York Polyclinic Medical School and Hospital, New York, N Y

INTERMISSION FOR REVIEW OF EXHIBITS

Diagnostic Clinic 'Dysenteritis and Diverticulosis' Dr John L Erdmann, Attending Surgeon of the New York Post Graduate Hospital and Medical School, New York, N Y

Address 'The Present Status of Bronchoscopy in Bronchial Asthma' Dr Louis H Clerf, Professor of Bronchoscopy and Esophagoscopy, Jefferson Medical College, Philadelphia, Pa

NOON INTERMISSION

Diagnostic Clinic 'Diseases of the Skin in Infancy and Childhood' Dr Howard Fox, Professor of Dermatology and Syphilology, University and Bellevue Hospital Medical College New York, N Y

Address 'Diphtheria Prevention Methods and Results' Dr John G Fitzgerald, Dean and Professor of Hygiene and Preventive Medicine, University of Toronto Faculty of Medicine, Toronto, Canada

Address 'Lymphoma' Dr Charles R Austrian, Associate Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, Md

INTERMISSION FOR REVIEW OF EXHIBITS

Address 'Diagnosis and Treatment of Surgical Lesions of the Spinal Cord' Dr Alfred W Adson, Professor of Neurosurgery, University of Minnesota Graduate School of Medicine, Rochester, Minn

Address 'The Differential Diagnosis of the Major Psychoses' Dr Clarence B Farrar, Professor of Psychiatry, University of Toronto Faculty of Medicine, Toronto, Canada

Address 'Interrelationship of Mother and Fetus' Dr Fred L Adair, Professor of Obstetrics and Gynecology, The School of Medicine of the Division of Biological Sciences, University of Chicago, Chicago, Ill

DINNER INTERMISSION, 7 00 P M

Address 'The Surgical Treatment of Cranial Cerebral Injuries' Dr Loyd Davis, Professor of Surgery, Northwestern University Medical School, Chicago, Illinois

Address 'Recent Advances in the Treatment of Infectious Diseases' Dr., St. Louis, Mo

Address 'The Water Balance of the Surgical Patient' Dr Frederick A Collier, Professor of Surgery, University of Michigan Medical School, Ann Arbor, Michigan

Address 'The Importance of Dietetics in Modern Medicine' Dr Robert W. Keeton, Professor of Medicine and Head of the Department, University of Illinois College of Medicine, Chicago, Illinois

WEDNESDAY, OCTOBER 16TH, 8 00 A M

Diagnostic Clinic 'Deficiency Diseases of Children' Dr Alan G Brown, Associate Professor of Medicine (Pediatrics) University of Toronto Faculty of Medicine, Toronto, Canada

Diagnostic Clinic 'Infections of the Urinary Tract' Dr Hugh Cabot, Professor of Surgery, University of Minnesota Graduate School of Medicine and Consulting Surgeon at the Mayo Clinic, Rochester, Minn

Diagnostic Clinic 'The Gallbladder' Dr. David Riesman, Professor of Clinical Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pa

INTERMISSION FOR REVIEW OF EXHIBITS

Diagnostic Clinic 'Complications of Late Pregnancy' Dr John R Fraser, Professor of Obstetrics and Gynecology, McGill University Faculty of Medicine, Montreal, Canada

Address 'The Present Status of our Knowledge of the Supracarotid Cortical Homology' Dr George A Harrop, Associate Professor of Medicine, Johns Hopkins University School of Medicine, Baltimore, Md

NOON INTERMISSION

Diagnostic Clinic 'Benign Tumors of the Breast'

Dr. Edward J. Klopp, Professor of Surgery, Jefferson Medical College, Philadelphia, Pa.

Address: "Influence of the Anesthetic on the Risk of Operation". Dr. George P. Muller, Professor of Clinical Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa.

Address: "Fracture of the Neck of the Femur". Dr. Dallas B. Phemister, Professor of Surgery, The School of Medicine of the Division of the Biological Sciences, University of Chicago, Chicago, Ill.

INTERMISSION FOR REVIEW OF EXHIBITS

Address: "Acute Appendicitis in the Extremes of Life". Dr. Urban Maes, Professor of Surgery, Louisiana State University Medical Center, New Orleans, La.

Address: "Studies in Abdominal Pain". Dr. Frederick J. Kaltefleiter, Clinical Professor of Medicine, Jefferson Medical College, Philadelphia, Pa.

Address: "Traumatic Subdural Hematoma". Dr. William James Gardner, Cleveland Clinic, Cleveland, Ohio.

ASSEMBLY DINNER

Twentieth Anniversary Ceremony.

Address, The Honorable Herbert A. Bruce, Lieutenant Governor of Ontario, Toronto, Ontario, Canada.

Address, Rear-Admiral Cary T. Grayson, Chairman, The American Red Cross, Washington, D. C.

THURSDAY, OCTOBER 17TH, 8:00 A. M.

Diagnostic Clinic: "Psychoses Associated with Organic Brain Disease". Dr. Louis L. Karnosh, Assistant Clinical Professor of Nervous Diseases, Western Reserve University School of Medicine, Cleveland, Ohio.

Diagnostic Clinic: "Differential Diagnosis between Gastric and Duodenal Ulcer and Gallstones". Dr. William D. Haggard, Professor of Clinical Surgery, Vanderbilt University School of Medicine, Nashville, Tenn.

Diagnostic Clinic: "Ménier's Disease". Dr. Walter E. Dandy, Adjunct Professor of Neurological Surgery, Johns Hopkins University School of Medicine, Baltimore, Md.

INTERMISSION FOR REVIEW OF EXHIBITS

Diagnostic Clinic: "Cardiac Diseases". Dr. Harlow Brooks, Emeritus Professor of Clinical Medicine, New York University and Bellevue Hospital Medical College, New York, N. Y.

Address: "Treatment of Hyperinsulinism". Dr. E. Starr Judd, Professor of Surgery, University of Minnesota Graduate School of Medicine, Rochester, Minn.

NOON INTERMISSION

Diagnostic Clinic: "Conditions Producing Splenomegaly". Dr. Campbell P. Howard, Professor of Medicine, McGill University Faculty of Medicine, Montreal, Canada.

Diagnostic Clinic: "Obstructive Jaundice". Dr. Waltman Walters, Associate Professor of Surgery, University of Minnesota Graduate School of Medicine, Mayo Clinic, Rochester, Minn.

Address: "Low Back Disability". Dr. Wallace S. Duncan, Cleveland, Ohio.

INTERMISSION FOR REVIEW OF EXHIBITS

Address: "Trigeminal Neuralgia". Dr. Charles H. Frazier, John Rhea Barton Professor of Surgery, University of Pennsylvania School of Medicine and Professor of Neurological Surgery, University of Pennsylvania Graduate School of Medicine, Philadelphia, Pa.

Address: "Bacterial Endocarditis". Dr. Ralph A. Kinsella, Professor of Internal Medicine, St. Louis University School of Medicine, St. Louis, Mo.

Address: "The Treatment of Diseases of the Nasal Sinuses in Infants and Young Children". Dr. Lee W. Dean, Professor of Otolaryngology, Washington University School of Medicine, St. Louis, Mo.

DINNER INTERMISSION

Address: "Diseases of the Thyroid Gland". Dr. James H. Means, Jackson Professor of Clinical Medicine, Harvard University Medical School, Boston, Mass.

Address: "Agranulocytosis". Dr. Russell L. Haden, Chief of the Medical Division, Cleveland Clinic, Cleveland, Ohio.

Address: "A Decade's Advance in Ophthalmology". The Joseph Schneider Foundation Presentation. Dr. William H. Wilmer, Professor Emeritus of Ophthalmology, Johns Hopkins University School of Medicine, Baltimore, Md.

Address: "Diagnosis and Treatment of Cancer of the Lip, Mouth and Throat". Dr. Arthur C. Christie, Professor of Clinical Radiology, Georgetown University Medical School, Washington, D. C.

FRIDAY, OCTOBER 18TH, 8:00 A. M.

Diagnostic Clinic: "Traumatic Surgery of the Knee". Dr. John J. Moorhead, Professor of Clinical Surgery, New York Post Graduate Medical School, New York, N. Y.

Diagnostic Clinic: "Diabetes". Dr. Elliott P. Joslin, Harvard University Medical School, Boston, Mass.

Diagnostic Clinic: "Breast". Dr. Dean D. I. Johns Hopkins University, Baltimore, Md.

INTERMISSION FOR REVIEW OF EXHIBITS

Diagnostic Clinic: "Hypertension". Dr. George Crile, Cleveland Clinic, Cleveland, Ohio.

Diagnostic Clinic: "Deficiency Diseases in Adults". Dr. William Gerry Morgan, Dean and Professor of Gastro-Enterology, Georgetown University School of Medicine, Washington, D. C.

NOON INTERMISSION

Diagnostic Clinic: "Obstructive Lesions of the Bladder". Dr. Joseph F. McCarthy, Professor of Clinical Urology, Executive Officer of the Department of Urology, New York Post Graduate Medical School, Columbia University, New York, N. Y.

Address: "The Stomach's Response to the Menu". Dr. T. Wingate Todd, Henry Willson Payne Professor of Anatomy, Western Reserve University School of Medicine, Cleveland, Ohio.

Address: "Further Advances in our Knowledge of the Thymus and Pinal Glands". Dr. Leonard G. Rowntree, Director, Philadelphia Institute for Medical Research, Philadelphia, Pa.

INTERMISSION FOR REVIEW OF EXHIBITS

Address: "The Diagnosis and Treatment of Surgical Lesions of the Pancreas". Dr. Irvin Abell, Clinical Professor of Surgery, University of Louisville School of Medicine, Louisville, Ky.

Address: "The Diagnosis and Management of the Septic Appendix". Dr. W. Wayne Babcock, Professor of Surgery and Clinical Surgery, Temple University School of Medicine, Philadelphia, Pa.

Address: "Surgical Treatment of Gall Stones". Dr. Frank H. Lahey, Director of Surgery in the Lahey Clinic; Surgeon to the New England Baptist Hospital and New England Deaconess Hospital, Boston, Mass.

"Doctor, I have caught a hard cold from getting too warm dancing the rumba."

"That is very common now, madam. I call it rumbago."—*L'Illustration, Paris.*

Patient: "I'm dreadfully nervous. I've never had an operation before."

Nurse (reassuringly): "You needn't feel

frightened ma'am. Neither has the doctor."
—*Dental News.*

A man in southern Nebraska who was recently haled to court and fined for practicing medicine without a license had been practicing, off and on, it was found, since 1877.

County Societies

Albany County

SOME OF THE "INSIDE FACTS" of European lands which are not permitted to go out on the cables, are brought back by Dr. Joseph Cohen, of Albany, who has just returned home after completing his medical studies at the University of Berne. He traveled all over Europe in vacations and after graduation, and reports great distress in Germany from lack of proper food and clothing. Criticism of Hitler is said to be open and growing. Dr. Cohen reports an epidemic of typhoid in Rome which has been kept quiet, and he says he found the people in every country wishing they could emigrate to America. The common people of Italy were "heart and soul with Mussolini," but expressed an "astonishing aversion to war."

DR. JOHN G. COPELAND, medical director of Albany Hospital for the past 10 years, has resigned, to attend the Graduate School of Medicine of the University of Pennsylvania at Philadelphia.

THE ALBANY COUNTY MEDICAL SOCIETY held its annual outing and clambake at Picard's Farm, New Salem, on September 11.

Dutchess County

A COMMITTEE OF PHYSICIANS to organize the Medical Society of Dutchess County was appointed at a meeting at the Amrita Club in Poughkeepsie on September 11. The medical men of Dutchess and Putnam counties formerly joined forces in one organization called the Dutchess-Putnam Medical Society. Now the society must obtain a new charter from the secretary of state changing its corporate name because of withdrawal of Putnam County members who have formed their own society. The Putnam County group, comprising about 10 physicians, received a charter last July.

On the committee on reorganization are Dr. A. L. Peckham, Dr. John R. Ross, Dr. Howard P. Carpenter, and Mayor Spratt, counsel to the society. The Dutchess County organization has 155 members since withdrawal of the Putnam County group.

Kings County

DOCTORS TAKE too little active interest in government, Supreme Court Justice Albert Conway told the members of the South Brooklyn Medical Society at their annual dinner. Especially in the matter of health insurance.

"This subject is of vital importance to all of you," he declared, "yet you are content to sit back and argue the matter among yourselves, but do nothing in the line of informing your Representatives in Congress as to your opinions and wishes."

SURGICAL INSTRUMENTS believed to have been used at the autopsy on the body of President Abraham Lincoln on April 15, 1865, the day after he was shot by John Wilkes Booth, have been presented to the Medical Society of the County of Kings by Dr. William Browning, professor emeritus of neurology at Long Island College Hospital.

New York County

MORE DOCTORS are badly needed to help check the spread of social diseases, as revealed in the records of the Women's Court, Magistrate Jonah J. Goldstein, who recently completed a term there, is quoted as saying:

"I record regretfully that the City of New York is not doing its duty in checking the spread of certain diseases. The problem is with us. The city has the power, but apparently is lacking in the social vision and the will. The records disclose that over 75 per cent of those brought before this court are health menaces. The city's attitude in handling this problem is best evidenced by the fact that only one part-time doctor is assigned to this court and that the chief of the bureau employed by the City of New York to handle this huge problem is on a part-time basis. In many cases not even the names and addresses of the prisoners are checked. Not until this becomes a full-time job, and not a part-time job, will we get anywhere in checking this health menace. It is high time that we treat the cases in the Women's Court as a medico-social problem." Because only a part-time physician is assigned to the court, Magistrate Goldstein said, offenders are often turned loose without any physical examination.

IN ORDER that consumers may know what kind of vitamin D milk they are receiving, the New York City department of health has recently issued regulations requiring complete information to be printed on the caps of bottles. This must include not only the method that has been used in fortifying the milk but also the number of units of vitamin D per quart. The board has fixed the following minimum vitamin D content

for the three kinds; if produced by feeding irradiated yeast to cows, 430 units per quart; if produced by direct irradiation with ultraviolet rays or carbon arc ray lamps, 135 units; if produced by the addition of concentrate, 400 units. Physicians should give instructions as to which kind of vitamin D milk they wish their patients to receive, the health department bulletin suggested.

MARIHUANA TRAFFIC in New York City has been dealt a staggering blow through a cooperative campaign for its control conducted by police and health departments.

Samples of the marihuana plant (*cannabis sativa*) also known as hashish, bhang and loco weed, were sent by the Division of Narcotics of the police department to various precincts throughout the greater city of New York, so that detectives and patrolmen might become familiar with the leaf. Instructions were issued to these men to report at once to the Narcotics Division any areas in which plants resembling marihuana were found. Upon definite identification of the suspected plant, the Narcotics Division reported the facts to the New York City Department of Health which had all growing plants torn up by the roots. During June and July, 260 lots were cleared of 170 tons of marihuana, including root and stalk, by relief labor.

In addition to areas adjacent to New York City, marihuana has been discovered as far north as Waddington, close to the St. Lawrence river, and as far west as Erie county, suggesting that it may be grown almost anywhere in New York State.

Onondaga County

DR. J. G. FRED HISS, Dr. Jane Sands Robb and her husband, Dr. R. Cummings Robb, all members of the Syracuse University College of Medicine faculty, were awarded the bronze medal of the American Medical Association for outstanding research at the annual conclave of the association in Atlantic City, N. J.

The Syracuse scientists were honored for their joint research, conducted more than 10 years, on heart muscle-bundle physiology and experimental coronary lesions. Their research is regarded as opening a new approach in the treatment of coronary thrombosis.

The medal was the third highest in the division of Class One exhibits of the association, awarded on the basis of originality and excellence of presentation of individual investigation.

Dr. Jane Robb directed the research, mak-

ing her first report on it three years ago at a meeting of the Syracuse University Medical Alumni Association here. Besides designating anatomical names for five heart muscles she had discovered in her research, she presented what was regarded as a highly important explanation of the electrical action of heart muscles.

With the aid of her husband and Dr. Hiss, Dr. Jane Robb experimented with the hearts of cats, dogs, pigs, bulls, sheep and monkeys. In these animals she was able to produce artificial coronary thrombosis by tying off one of the heart muscles, according to a report she made last April before the Federation of American Societies for Experimental Biology at Detroit.

By charting action of heart muscles on an electrocardiograph recently acquired by the College of Medicine, the scientists determined which of the heart muscles are affected when coronary thrombosis sets in.

DETAILS ARE being worked out for a "three-cent-a-day" hospital plan in Syracuse, with a probable start late in the fall, according to Carl P. Wright, superintendent of the General Hospital.

Queens County

THE HOUSE COMMITTEE of the Auxiliary of the Queens County Medical Society is furnishing a new board room for the medical society in the Medical Building, Forest Hills. The auxiliary voted a considerable sum of money at the close of the season for this purpose. Mrs. Carl Boettiger is chairman of the House committee. She is the wife of Dr. Carl Boettiger, Flushing, chairman of the 2nd district.

Seventh District

A MEETING of the physicians of the Seventh District was held in the recreation hall of the U. S. Veterans Hospital in Canandaigua on September 26. The chief topic of discussion was infantile paralysis. Morning and afternoon sessions were held, with luncheon, inspection of the hospital, and a visit to the Sonnenberg gardens.

Headed by Monroe County with 778 members, and Ontario County with 72 members, the district organization is made up of representatives from Cayuga, Yates, Steuben, Wayne and Seneca Counties. Officers are Dr. Alfred K. Bates of Auburn, president; Dr. Thomas W. Maloney of Geneva, first vice-president; Dr. Howard A. Barsted of Hornell, secretary, and Dr. Edward T. Wentworth of Rochester, treasurer.

Medicolegal

LORENZ J. BROSNAN, ESQ

Counsel, Medical Society of the State of New York

Restraint of Unlawful Practice of Medicine

The problem of satisfactorily combating the unlawful practitioner of medicine, is always before us in one form or another. The method in which such a situation was handled in a neighboring state forms the subject of a case* recently before its highest Court.

The statute regulating the practice of medicine in that State, is in general similar to the New York statute, and forbids any person to practice medicine and surgery within the State without a license from the State Public Health Council. The statute makes medical practice without a license a misdemeanor and provides penalties for such offenses. It seems that a certain M in one of the larger cities of the State, had been for several years engaged in treating numerous persons for various ailments and infirmities, undertaking to make diagnosis and prescribe treatment, all for a monetary consideration. He had referred to himself in newspaper advertisements, according to the charges in the case, as Dr R B M and had described his office as "M— General Health Center."

One of the duly licensed physicians who practiced his profession in the same city, in order to put M— out of practice, brought a suit against him in the Chancery Court for the purpose of enjoining the defendant from practicing the profession of a physician and surgeon in the State without a license. The proceeding was instituted by the plaintiff "for the benefit of himself and all other physicians similarly located." The bill in Chancery which set forth the complaint, included the charges above referred to and a declaration that the practice of the profession is not a common right, but a privilege obtained by virtue of a public grant in the nature of a franchise and that the plaintiff and other licensed practitioners have an interest similar to a property right entitling them to equitable relief in the form of an injunction against encroachment thereon by an unlicensed person in order to prevent the continuance of the irreparable injuries caused by such conduct.

An application was made by the defendant to the Trial Chancellor to test the

sufficiency of the charges by a demurrer. The Trial Chancellor sustained the defendant and the matter was taken for review to the Supreme Court of Appeals of that State. That Court reversed the ruling of the Chancellor and held that the charges presented a prima facie case for equitable relief in the form of the injunction sought by the plaintiff.

In the opinion, the Court for a precedent, laid particular stress upon a case involving the illegal practice of law.** In that case, a licensed attorney had brought a similar suit to enjoin a corporation from practicing law by hiring attorneys to carry on the work of the practice of law. The opinion in the latter case was quoted in part as follows:

The right to practice law is an exclusive valuable privilege, exclusive in that it is restricted to those who, after special training and after examination and determination of special fitness, are accorded the right to follow the profession of attorneys and counsellors at law, and valuable, in that it carries with it the opportunity to secure material benefits and to earn a livelihood not given to those outside the profession. This right is in the nature of a franchise, and a practicing attorney at law and others similarly situated have such an interest as members of the legal profession in the nature of a property right, as will support the authority of such attorney at law to proceed as a proper party in an action to secure equitable relief against encroachment upon such right by a corporation.

In its opinion the Court cited several statements from other cases in support of the proposition that the right to practice a profession is a valuable property right entitled to protection by the courts, which included the following:

The right of a person to practice the profession for which he has prepared himself is property of the very highest character.

The right to practice medicine is like the right to practice any other profession a valuable property right in which, under the Constitution and Laws of the state, one is entitled to be protected and secured.

The right of a physician to toil in his profession as well as that of all other citizens to labor in their chosen work is both liberty and property, partaking of the nature of each, and

* Sloan v Mitchell, 168 S E 800

** Dworken v Apartment House Ass'n, 176 N E 577

is guaranteed by constitutional mandate from unwarrantable interference.

The argument was urged before the Court by the defendant that since the acts complained of amounted to charges that the defendant had been guilty of a crime, no injunction should be granted, but that proper procedure would require prosecution of the defendant on criminal charges for whatever crime, if any, he had committed. The Court, however, refused to give support to the contention, and ruled that the case was a proper one for injunction even though the same charges might form a basis for prosecution in the criminal courts. In so holding the Court quoted the following in support of the ruling:

It is freely admitted that equity will not enjoin the commission of a crime as such, as, for instance it will not enjoin one from carrying concealed deadly weapons or from committing any other crime whether it be a felony or misdemeanor, where nothing else is involved except the commission of the crime; but where the chief purpose of the statute is to provide for the public welfare by regulating (not prohibiting) some already lawful calling and only provides a penalty for refusing to comply with such regulations, and which penalty is enacted as a punishment for such refusal, we can discover no logical reason why a court, in administering the laws of its jurisdiction, would be powerless to prevent the doing of the prohibited act merely because a penalty (only nominal in this case) is attached for a refusal to comply with the regulation.

Death Following Novocaine Injection

A physician who specialized in nose and throat work, was consulted by a 21 year old girl who complained of throat trouble. The doctor found that she was suffering from a peritonsillar abscess. He treated the condition and it cleared up, but since her

tonsils were enlarged and diseased he advised their removal as soon as her condition permitted.

A few months later she returned to his office and was ready for the operation. The doctor seated the patient in a chair and examined her pulse, heart, and lungs; found them to be functioning normally and decided that she was a safe subject for novocaine. Using a sterile needle and syringe, he proceeded to inject 10 c.c. of novocaine for the purpose of anesthetizing the field of the operation. Just as he injected the first charge of novocaine under the anterior pillar of the patient's right tonsil, she stiffened up in the chair and fell forward. The doctor picked her up and felt for her pulse, but could find none and was unable to hear her heart beat. He poured whiskey down her throat and gave her artificial respiration. He also called in another doctor from an adjoining office who assisted him in his attempts to revive the patient, but the attempts were unsuccessful.

The novocaine which the doctor had used, he obtained from some bottle from which he had taken novocaine administered to several other patients with no ill effects. An analysis of the solution failed to disclose any reason why it should have caused any unusual reaction in the patient. An autopsy was performed upon the patient by an assistant medical examiner, who gave the following cause for death: "Shock following novocaine injection for local tonsillectomy."

An action was brought by an administrator, charging the defendant with having wrongfully caused the death of the patient. A conference was held with the plaintiff's attorney when the case was called for trial, before the Judge and the plaintiff consented to discontinue the action, thereby acknowledging that he was unable to prove the doctor had been guilty of malpractice.

PROFESSIONAL SECRECY TO SHIELD CRIMINALS

British criminals, it appears, find it much safer to have their injuries patched up by a doctor than the American bandits do. The Chairman of the Central Ethical Committee of the British Medical Association recently made the following ruling, which has been approved by the Council of the Association:

"A request by the police to a member of the medical profession to give the names and addresses of any patients who had consulted him for symptoms particularized by the police ought to be declined, on the ground that to accede to such a request would be a gross breach of professional

confidence and might involve him in an action for damages by the patient or patients concerned."

A monument to the "Unknown Dog" was unveiled in Leningrad on August 8 at the Institute of Experimental Medicine. The inscription on the monument, bearing the stone image of a dog, reads: "In memory of all dogs which have given their lives for physiological experiment for the purpose of prolonging human life and improving human health."

Across the Desk

YEAR BY YEAR the chiropractors, naturopaths, and manipulators of all sorts keep hammering at the doors of the state legislatures for recognition, and year by year the medical societies are put to considerable expense and effort just to keep before the lawmakers' minds the simple fact that healing the human body should be entrusted only to those who know something about it. The almost comical claims of some of these cults is illustrated in the bill to license chiropractors that came before the Massachusetts legislature this last session. It not only permitted chiropractors to treat disease by adjustments of the spine, but forbade anybody else to do so! It defined chiropractic as follows:

"The system, method or science, commonly known as chiropractic, or the practice of chiropractic, is defined to be the science of spinal examination; the adjusting of the segments and the articulations of the human spinal column by hand only. This definition is inclusive and any and all other methods are hereby declared not to be chiropractic."

Then in another section it provided that anyone not registered as a chiropractor who practiced this "science or system" should be liable to a fine of \$50 to \$500 or a jail term of 30 days to one year. If the English language means anything, this bill meant that if a duly registered physician examined a single spine by eye or hand he could be sent to molder in jail for a year—two spines, two years. Of course the bill did not pass, but what a light it sheds on its authors. Their examination might well start at a point just north of the spine.

Looking over the trend in recent years, two things stand out. One is that a large number of States are permitting the practice of "drugless healing." The other is that more and more knowledge is being required of those allowed to register under such acts. If these requirements are raised higher and higher by intelligent public demand, it may be possible in time to compel all who practice the healing art to have first a complete medical education. Anything less is a peril to the people's health and life.

"Drugless healers" are now licensed in California, Illinois, Indiana, Kentucky, Michigan, New Jersey, Ohio, Pennsylvania, Virginia and Washington. The practice of naturopathy is regulated specifically by law in Arizona, Connecticut, District of Columbia, Florida, Oregon, South Carolina and Utah. If we examine the new Arizona statute, we find that the naturopath must have a high school diploma, and must have

studied four years in a school of drugless therapeutics, with the following number of hours on the following subjects:

Anatomy, including dissection, 650 hours; histology and embryology, 150 hours; physiology, 250 hours; chemistry, 200 hours; bacteriology, 100 hours; pathology, 350 hours; diagnosis, including physical, clinical, x-ray, symptomatology, dermatology and mental diseases, 500 hours; orthopedics, 100 hours; manipulative and adjustive technic, 200 hours; dietetics, 200 hours; drugless gynecology, 150 hours; non-surgical obstetrics, 150 hours; toxicology, 50 hours; first aid, 50 hours; ear, nose and throat, 50 hours; hygiene and sanitation, 100 hours; jurisprudence, 45 hours; drugless therapeutics, including electrotherapy, physiotherapy, hydrotherapy, massage, and practice of naturopathy, 750 hours; clinical practice, 300 hours, and such other subjects as the board may require, excepting materia medica and major surgery, with a total not less than 4,500 hours. An applicant must pass an examination given by the basic science examining board in anatomy, bacteriology, chemistry, hygiene, pathology and physiology.

The thought that rises very naturally to the mind is: Why not spend more time and study and have a thorough medical education? Then the practitioner can heal with or without drugs, as he wishes, but he will at least have an adequate understanding of the human organism under his hand.

A GOOD POINT was made the other day by a doctor who was speaking over the radio about psychiatry. The patient, he said, should get rid of the feeling that a stigma attaches to mental illness. "The proper attitude," said Dr. Irving, "is to consider all mental disturbances on a par with ordinary illness," and "there should be no more sense of shame or guilt over a neurosis, or an 'insanity', than over an attack of appendicitis."

There is a lot of common sense in that statement. Mental upsets, in these nerve-racking times, are often caused by influences totally beyond the patient's control, and no blame of any kind can be laid at his door. The finer his personality, the more he feels the hammer-blows of misfortune. His neighbor, with a nature about as delicate as that of an ox, has no call to look down on him. Change the man's circumstances, or change his outlook towards them, and his storm-wracked soul will right itself to an even keel.

The wrong one, in fact, is sometimes brought to the psychiatric clinic for mental examination. The wife is brought when it is

the husband who should be locked up, and vice versa. A doctor in a New York mental hospital remarked not long ago that he often felt when a little child was brought for correction treatment that the parents were the ones who needed it most. Many an actual case is on record where the stealing, lying, screaming, fighting child is sent to live with grandma or Aunt Kate, and miraculously returns to normalcy and happiness.

We are but children of a larger growth, and our mental troubles, too, may not be of our making. Yet we tend to hide them from the gentle questioning of the psychiatrist because we fear some stigma that is entirely in our imagination. The doctor can do nothing for the patient who is covering up and concealing the facts, and Dr. Irving is right when he says that honesty and frankness are the first requisites for recovery.

In the same way, irreparable harm is done by people who conceal diseases that carry a moral stigma. Society seems to ignore blandly the fact that such infections may be contracted innocently. A medical journal recently recorded a case where four members of a family contracted syphilis in various ways from a young daughter who had acquired it from an outside source. First, she gave her chewing gum to her little brother; then she chewed some bread to a soft pulp and fed it to the baby. The baby, in nursing, infected the mother, who in turn infected the father. Four innocent victims. And it became known only when the father and mother accused each other of infidelity and appealed to the doctor. He found out the truth and saved the home.

Women who suspect malignant growths sometimes shrink in terror from telling the doctor, and conceal the scaling and thickening spot on the skin, or the pigmented mole, or other manifestation that calls aloud for instant help, till too late. The State Department of Health is running a series of articles in *Health News* on various types of cancer, with special reference to signs, character of growth, and treatment, to aid the physician to recognize it early enough for successful treatment. But very often it is the patient who needs the education, needs to learn the great lesson of confiding in the doctor and telling him the truth, the whole truth, and nothing but the truth.

Pages, in fact, could be written on the harm done just by hiding away the little ills of the body and mind till they become big ills. If some bright young advertising man should write a slogan like "Little ills make little bills," and broadcast it appropriately on the billboards, it might catch the spirit of the times, so that people might

heed the call of dollars and cents where the appeal of common sense is now ignored.

A SERIOUS DISCUSSION has been going on for some months in the pages of the medical journals over the question: "Shall we tell the cancer patient the truth?" The very fact that the profession is debating the subject shows that it is rearranging its ideas and questioning its own former attitude. Has the time come when honesty is the best policy? The American Society for the Control of Cancer thinks that it has. In its bulletin it points to the extensive educational efforts in recent years to give the public the facts about cancer, and suggests that deception and subterfuge by the physician at the very time when cancer becomes an actuality mars and damages public confidence in all that has been taught. The fear of cancer is almost universal, and if people feel that they cannot depend on their own family doctors to tell them the truth, then fear degenerates into panic. The laity have been educated up to the point, however, where they are using their intelligence rather than their emotions, and they expect and should receive frank and intelligent treatment from their physicians. The enlightened attitude of the laity is leading to early treatments and to more cures, and this splendid state of things should be fostered and encouraged.

Sweden has for years had the settled policy of informing cancer patients of their true condition as a routine procedure. Of course, delicacy and tact are often used in breaking the news, but eventually all are told. Swedish doctors agree unanimously on the wisdom of this course. The average citizen, they find, fights more intelligently and persistently when he knows what he has to face. Morale is high in both doctor and patient. Diagnosis is rapid and accurate. Treatments are prompt and well-attended. In short, the situation is in shining contrast to other European lands where ignorance and fear darken the picture and hamper successful treatment.

Every rule has its exceptions, and the bulletin of the American Society for the Control of Cancer admits that in exceptional cases or peculiar situations it might be best to keep the patient in ignorance. That is for the physician to decide. But taking the public by and large, the feeling of those who have been closest to the educational campaign is that the laity have matured sufficiently to hear the truth and that to continue a policy of deception may result in the collapse of much already achieved.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review as dictated by their merits or in the interests of our readers.]

Clinical Tuberculosis Edited by Benjamin Goldberg M D Two volumes Fully Illustrated with over 640 Half Tone and Line Engravings and 9 Full Page Color Plates Octavo Philadelphia, F A Davis Company, 1935 Cloth, \$22 00

The Spleen and Resistance By David Perl's M D & Jessie Marmorston M D Octavo of 170 pages Baltimore, Williams & Wilkins Company 1935 Cloth, \$2 00

The Diseases of the Endocrine Glands By Hermann Zondek, M D Third edition Octavo of 492 pages, illustrated Baltimore Williams & Wilkins Company, 1935 Cloth, \$11 00

A Textbook of Clinical Neurology with an Introduction to the History of Neurology By Israel S Wechsler, M D Third edition Octavo of 826 pages, illustrated Philadelphia W B Saunders Company, 1935 Cloth, \$7 00

The Surgical Clinics of North America Volume 15, number 3 June, 1935 (Chicago Number) Published every other month by the W B Saunders Company, Philadelphia and London Per Clinic Year (6 issues) Cloth \$16 00, Paper, \$12 00

Mental Health Its Principles and Practice

with Emphasis on the Treatment of Mental Deviations By Frank L Howard, Ph D & Frederick L Patry M D First edition Octavo of 551 pages illustrated New York, Harper & Brothers, 1935 Cloth, \$3 50

Nutrition Work with Children By Lydia J Roberts Second edition Octavo of 639 pages, illustrated Chicago University of Chicago Press 1935 Cloth, \$4 00

Methods and Materials of Health Education By Jesse F Williams, M D & Fannie B Shaw, M A Duodecimo of 331 pages New York Thomas Nelson and Sons, 1935

Arthritis and Rheumatoid Conditions their Nature and Treatment By Ralph Pemberton, M D Second edition Octavo of 455 pages illustrated Philadelphia Lea & Febiger, 1935 Cloth, \$5 50

Diagnosis and Treatment of Skin Diseases Including the Care of the Normal Skin. By Jacob H Swartz M D & Margaret G Reilly R N Octavo of 316 pages, illustrated New York, The Macmillan Company 1935 Cloth, \$3 50

The Autonomic Nervous System Anatomy, Physiology and Surgical Treatment By James C White, M D Octavo of 386 pages, illustrated New York The Macmillan Company 1935 Cloth, \$7 00

REVIEWED

The Study of Anatomy Written for the Medical Student By S E Whitnall M D Second edition 12mo of 93 pages Baltimore, William Wood & Company, 1933 Cloth \$1 50

The University of Bologna claims to have furnished instruction in human anatomy for a thousand years In consideration of the length of time that the subject has been taught, its instructors have been surprisingly inarticulate as far as printed discussions of methods of studying and teaching are concerned Articles on these subjects are confined almost exclusively to the last three decades and there are not many of them in this period A census of the number of articles more or less completely devoted to advances in the knowledge of human anatomy now appearing suggests that about one hundred thousand have been published during this same interval of time

Whitnall's brochure, which now is in its second edition is almost unique, if we except introductions to a few manuals of anat-

omy, in that it is addressed to the student rather than to the teacher It illuminates in vivid paragraphs phases of anatomical study both in the laboratory and in the library The student is counselled to disassemble the body into its many parts only that he may gain a picture of it as a united mechanism He is urged to exercise his powers of discrimination between the important and the unimportant, as much as to utilize his capacity to memorize facts and principles It is shown that the laboratory offers the one opportunity in his lifetime to fix in a leisurely manner gross anatomy in his mind by sight and touch and that if he forsakes a stool and the cadaver for a chair and a book on anatomy, he is cheating himself

The book is too pithy to be completely absorbed in a sitting It should be returned to by the first year student from time to time It is doubtless destined to save many a beginner misdirected effort It also offers stimulating reading to the teacher

E D CONGDON

Manual of Clinical Laboratory Methods. By Pauline S. Dimmitt, Ph.G. Octavo of 156 pages, illustrated. Philadelphia, F. A. Davis Company, 1934. Cloth, \$2.00.

This manual will be useful to students, interns, and physicians doing clinical laboratory work. It cannot, of course, replace the larger standard reference works. There are chapters on examination of the urine, blood, sputum, gastric contents, feces, exudates, and milk. The bacteriological methods include agglutination tests and the preparation of vaccines. Standard methods for blood chemistry, blood transfusion tests, and the Friedman test for pregnancy are described. Under the Wassermann test the author describes the Kolmer, Noguchi, and Eagle modifications. She also describes the Eagle flocculation test for syphilis.

The directions are clear and concise and there are numerous illustrations.

E. B. SMITH

Brucella Infections in Animals and Man. Methods of Laboratory Diagnosis. By I. Forest Huddleson. Octavo of 107 pages, illustrated. New York, The Commonwealth Fund, 1934.

This volume, arising from the cumulative experience of seventeen years of work in Brucella disease by an acknowledged master of these diseases, is particularly authoritative. Brucellosis in man is a "coming" disease, a disease that belongs to the future. With each passing year more cases are being reported in the literature of types unlike the book descriptions of undulating or "Malta" fever, cases resembling encephalitis, neurasthenia, malignant types like typhoid, ambulatory cases resembling tuberculosis, subclinical varieties of short duration. The clinician would be unable to diagnose Brucellosis in many of these cases without the aid of laboratory tests. Huddleson in this monograph presents briefly and concisely the most accepted methods. After a short history of the three species, *Brucella melitensis*, *Abortus*, and *Suis*, he describes their morphology, staining and cultural characteristics. The methods of isolating the organism from cattle, from the milk of animals, and from the blood of human beings are carefully discussed.

Since it is now a well-established fact that all three species of *Brucella* are pathogenic for human beings, gaining entrance by way of the skin through contact with infected animals or by way of the mouth through ingestion of raw dairy products which contain the living organism, and since knowledge of the laboratory tests is of paramount importance in making a diagnosis of this disease, this book comes

quite opportunely and should be of interest not only to the veterinarian and research worker, but particularly to the physician.

H. S. BIKOFF

Definite Diagnosis in General Practice. By W. L. Kitchens, M.D. Octavo of 1000 pages. Philadelphia, Saunders, 1934. Cloth, \$10.00.

This is an ingenious compilation of symptoms and diseases devised in such a way that the busy practitioner can obtain an accurate diagnosis readily and easily. However it pre-supposes a thorough study of the patient and careful evaluation of symptoms and laboratory data for without this it can be seen how one would be easily led into error.

The book is divided into two parts. In part one each symptom, 506 in number, is listed at the head of a separate page and underneath are recorded the diseases in which this symptom occurs followed by the page number in part two upon which the disease is noted.

In part two, each disease, 407 in number, is arranged on a separate page and the symptoms that occur in the disease, both subjective and objective, and the pertinent laboratory data are listed below with the page number upon which these symptoms were noted in part one.

In this way the book can be used for quick reference to obtain all the important symptoms of a given disease. Or knowing the symptoms and pertinent laboratory data by listing the diseases in which they occur a diagnosis can be readily obtained.

This book can be highly recommended to the practicing physician and we are sure he will find it both interesting and stimulating.

ARTHUR E. LAMB

Hughes' Practice of Medicine. Revised and Edited by Burgess Gordon, M.D. 15th ed. Duodecimo of 808 pages illustrated. Philadelphia, P. Blakiston's Son, [c. 1935]. Cloth, \$5.00

This small *Practice of Medicine* used by students for many years in its earlier editions has been completely revised with numerous deletions in the sections on treatment and furnishes a condensed description of the usual picture of disease. Many new subjects are treated and there are quite full sections on Nervous and Mental Diseases and Diseases of the Skin. A helpful feature is a list, on the back cover of normal laboratory findings from Nicholson's "Laboratory Medicine."

It is a very useful book for general review or quick reference.

W. E. MCCOLLUM

PNEUMOTHORAX IN PNEUMONIA**An Appraisal**JESSE G M BULLOWA, M D, *New York City**Clinical Professor of Medicine, New York University Medical College, Visiting Physician,
Harlem Hospital*

Before attempting to appraise the value of induced pneumothorax in the treatment of the pneumonias it is pertinent first to state the local and general effects of pneumothorax, and next to examine briefly the factors which influence the pneumonias in respect to the severity of their symptoms and the outcome.

The physiological results of inducing pneumothorax have been carefully studied by many workers (Moore,¹ Törning-Coryllos and Birnbaum,² Means and Balboni,³ Fine and Drinker,⁴ and Bendove,⁵ to mention a few.)

Normally the lungs are vacuum attached to the interior of the thoracic wall. During inspiration the bronchi are lengthened, fanned and their walls pulled apart. In expiration these movements are reversed and the bronchi are shortened, contracted and approximated at their distal ends. By reducing the vacuum the lung may be collapsed and become airless or atelectatic. When the pleura is free from adhesions and is filled with air at atmospheric pressure, the lung ceases to expand and no air may enter the alveoli. Under these circumstances the circulation diminishes in the collapsed lung and increases in the uncollapsed lung but the total cardiac output is diminished.

When the lung is filled with exudate, as in pneumonia, normal movements are impeded or cease completely in the part

consolidated. Under these circumstances the circulation through the lung is diminished as has been shown by injection of the consolidated lung with radiopaque substance by Gross. In the collapsed lung the vascularization is ample through tortuous capillaries, as has been shown by Moore¹ and Adams, Hrdina and Dostal.⁶ Means and Balboni found that with one lung collapsed, ventilation was accomplished in a normal manner in spite of greatly reduced vital capacity. However, when extra demands are made, the limit of ventilation is reached sooner in persons with a collapsed lung than in normal persons. At rest and even up to a point when the respiration is trebled or quadrupled, the single lung will secure a normal gaseous exchange and carbon dioxide tension, if greater demands are made, the limit of capacity may be reached and then anoxemia develops.

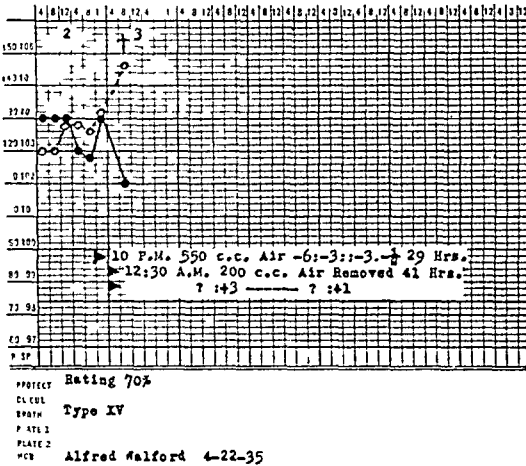
While the lung remains attached to the thorax wall, the lower lobe rotates and moves forward with inspiration. When a good pneumothorax is induced, the normal forward and rotating swing of the lower lobe on the upper at the hilus is stopped and the movement and rubbing of pleural surfaces cease. However, the collapsed lung is not motionless, under the fluoroscope it may be seen to swing from side to side. The beneficial effects of pneumothorax in pneumonia are

*From the Littauer Pneumonia Research Fund of New York University and the Medical Service
Harlem Hospital (Department of Hospitals), New York City. This research received support
from the Metropolitan Life Insurance Company. Read at the Annual Meeting of the Medical
Society of the State of New York, Albany, May 15, 1935.*

alleged to be due to rest of the lung and diminished lymph circulation. Approximation and rubbing of pleural surfaces continues unless the expansion of the

chest is impeded by air in the pleura, by fluid pleural exudate, or by external pressure or strapping. Sling strapping the costal margin diminishes the forward swing of the lower lobe by impeding movement of the lower chest.

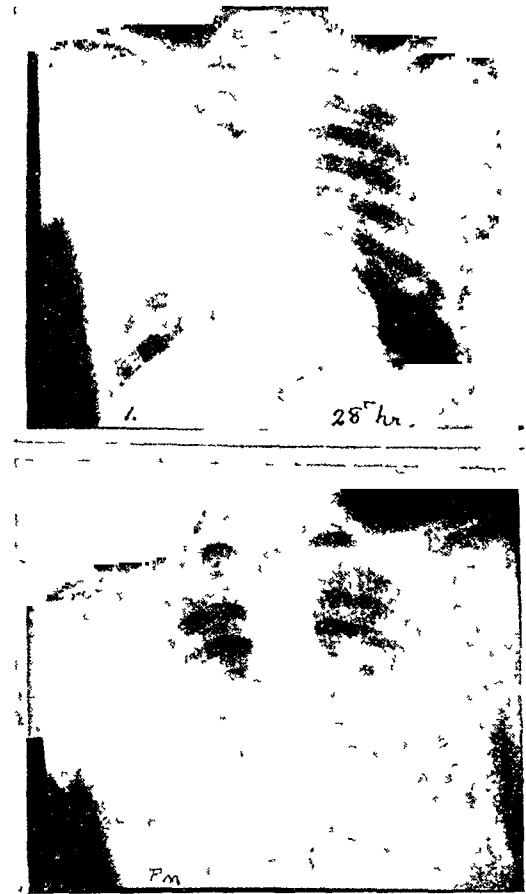
CHART I—FAILURE TO COLLAPSE EARLY PNFUMOTHORAX TYPE XV. POST MORTM X-RAY AFTER REMOVAL OF AIR DILIRIUM



Amount of Collapse and Local Effect

Aside from adhesions, the duration of the disease is not the only factor which influences our ability to collapse the involved lobe. The type of invading organism and the consequent character and amount of exudate are also important. Some cases of relatively short duration are not collapsed. In one case due to Pneumococcus Type XV, twenty-nine hours after the onset the lobe was so dense that it did not collapse appreciably (See Chart I.) This patient became delirious and orthopneic. Air was removed from the pleura at the forty-first hour, but he died in two and one-half hours. The postmortem x-ray examination in the sitting posture shows a dilated heart and an uncollapsed right upper lobe. When dense exudate has developed, the lobe involved cannot be collapsed and any effects on its intrinsic movements and circulation that might have resulted from collapse have already been secured without sacrifice of additional respiratory surface.

Recent recommendations of Blake are that a positive pressure shall be maintained in the pleura on expiration. This is not necessary for relief of pain. We have obtained relief of pleural pain after lung suction when the pneumothorax produced was too slight to be visualized by x-ray examination. With positive pressure, we occasionally observed a displacement of the mediastinum and in some cases, an emphysema of the chest tissues. When undertaking pulmonary collapse we cannot tell with certainty, either by the history, by pressure readings, by the amount of air accepted, or by previous x-ray examinations, the extent and nature of the adhesions which may be present, nor what part of the lung will be collapsed. The diseased lobe may not collapse appreciably if it is adherent (x-ray) but unless the uninvolved lung is adherent it will usually collapse to a greater extent than the lobe which is in-



flamed. Collapsed lungs may resolve rapidly, or more slowly than usual.

Results of Collapse

A collapsed lobe, already the seat of inflammation, may apparently become more involved, and a lobe which is not involved on the collapsed side may be involved. This happened twice, as exemplified in the following case.

B M entered on the third day. His left lower lobe was consolidated due to *Pneumococcus Type VIII* (See Chart II). The lung was well collapsed with pressure plus one plus three, on the sixth day the temperature rose and the left upper lobe was found consolidated while the lower lobe resolved. Both lobes cleared. There was a sterile exudate.

Secrecion may be expressed from the diseased lung into the lung of the opposite side and cause infection. Very early in the disease it may be difficult to determine that the opposite side is free from disease.

Usually the lung expands fairly promptly and additional air must be given to prevent re-expansion of the lung. Occasionally the lung shows no evidence of expanding, until air has been removed from the pleura.

Chest Pain

Chest pain in pneumonia is of two kinds. (1) pleural pain due to inflammation of the pleural surfaces with fibrinous exudate in the case of the *pneumococcus pneumonias* and early effusion in the *streptococcus pneumonias*, and (2) pain due to congestion and engorgement of the lung. The engorgement of the lung is associated with skin tenderness or hyperalgesia and fixation of the chest resulting from the heightened muscle tone of the involved myotome. Both varieties of pain are relieved by splinting the chest with adhesive plaster or by collapsing the lung. In the latter case, if too great pressure is applied, the pleura may become distended and cause severe precordial distress and at times abdominal pain. When there is positive pressure in the pleura, air may escape into the subcutaneous tissues (subcutaneous emphysema) and cause great or moderate local pain and tenderness. In our cases this occurred a number

of times, as shown in Table I. Sometimes the mediastinum is displaced.

Cyanosis

Early in pneumonia cyanosis occurs when areas of lung are blocked by exudate and when un-aerated blood mixes with the aerated blood. Under these circumstances, collapse of the lung shunts blood through the opposite side where it is adequately aerated if the demand for oxygen is not too great. Later in pneumonia the cyanosis if it occurs is due either to such extensive involvement of respiratory surface that aeration is inadequate, or to cardiac failure. This latter condition causes congestion of the lungs and inefficient aeration on that account. Such cyanosis has not been relieved by still further limiting the aeration area or by furnishing further embarrassment to the circulation by shunting all the blood through one lung, or part of one lung. Kinking or pressure on the great veins in the chest may interfere with the circulation. Under these circumstances the circulation is so embarrassed that orthopnea (uncommon in pneumonia) results. This occurred in two of our patients.

Factors in Prognosis

Before proceeding with an evaluation of pneumothorax in pneumonia, it is well to discuss the factors which determine the severity of the pneumonia and the rate of the pneumonia patient. Among the most important may be listed:

TABLE I
Induced Pneumothorax in 37 Cases

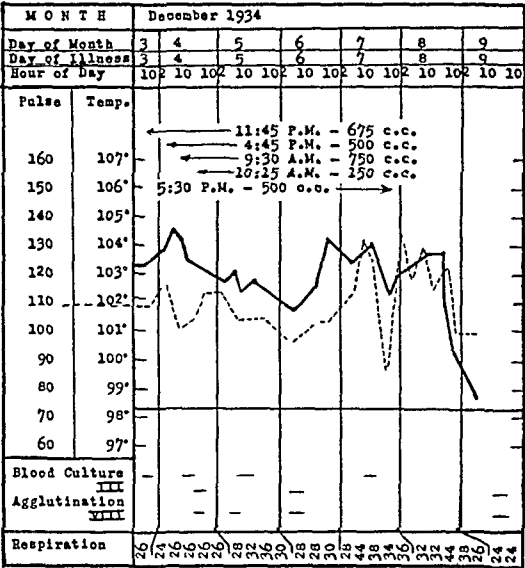
	Cases
<i>Pain</i>	
Relieved permanently	7
Not relieved	3
Temporarily or partially relieved	17
Increased	1
No pain originally. Subsequent abdominal and chest pains	2
<i>Subsequent pain</i>	
Same type	12
Local	6
Pressure	1
Spread to other side	1
Back	1
Abdominal or epigastric	5
Produced chest pain	4*
<i>No pain before or after induction of pneumothorax</i>	1

* Throbbing pain in one case. Anterior and posterior pain in one case.

1. The resistance of the patient, such as age and previous health or associated disease.
2. The kind and virulence of the organisms invading the patient and their number and, if a pneumococcus, its type.
3. The extent of the invasion with resulting loss of respiratory surface.
4. The occurrence of bacteremia and complications.

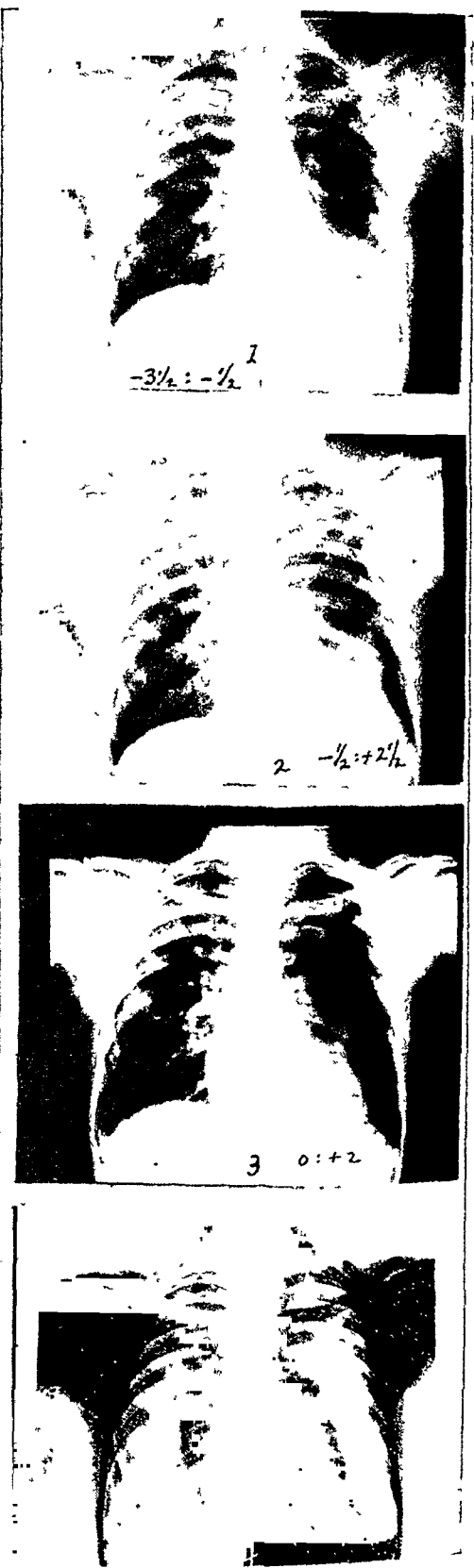
The resistance of the patient may be either (1) humoral, as may be readily seen in patients recovering from pneumonia when protective substance develops in response to stimulation of the invading germs, or when it is passively transferred from animals by treatment in administer-

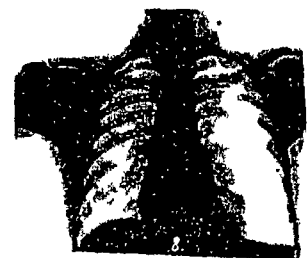
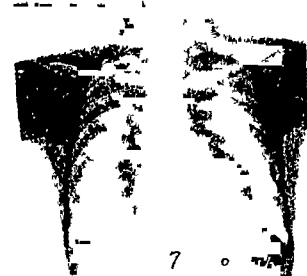
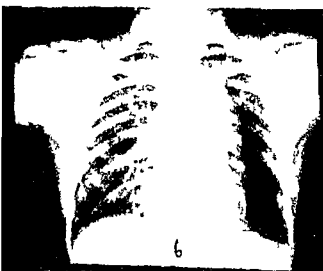
CHART II



NOTE: Extension to upper lobe with positive pressure. Rise of temperature. Termination on 9th day.

ing serum, or (2) due to specific local resistance forming a lung-blood barrier. This local resistance has recently been studied by Tuttle and Cannon⁸ in experimental observations on dogs in the passage of bacteria through the lungs into the blood stream. They have studied the difference in blood invasiveness resulting from injections of suspensions of staphylococcus aureus, bacillus prodigiosus and streptococcus hemolyticus into the lower lobe of the lungs of fourteen healthy dogs. The hemolytic streptococcus immediately entered the blood stream. The other

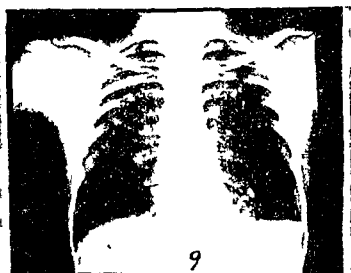




organisms were either derived or did not enter it. Our own experience with the invasiveness of streptococcus hemolyticus is in accord with theirs especially after pneumococcus infections, and is exemplified in the case the report of which follows.

CW suffered from a Type IV pneumonia of his right lower lobe. After collapse of the lung, which was incomplete because of adhesions, a bacteremia supervened. This subsided after a number of days and the temperature and pulse reached normal. Forty-eight hours later, the temperature and pulse rose (See Chart III) and the blood was again invaded by *Pneumococcus* Type IV and streptococcus hemolyticus; the patient succumbed.

The experiments of Neufeld and Kuhn⁹ seem to have bearing on this ques-



tion. They showed that the administration of ether to mice made organisms usually non pathogenic in the mouse capable of producing fibrinous pneumonia.

The virulence of organisms hastens death and may be seen by the well known necessity when testing serum for potency of selecting organisms which are not too virulent. With my co worker, Miss Wilcox, I have shown¹⁰ that the virulence of the relatively avirulent chained organisms may be stepped up by repeated mouse passage and that they then lose their chaining. Stillman,¹¹ in 1930, showed that virulent pneumococci rapidly entered the blood stream of rabbits exposed in spray chambers while avirulent organisms were destroyed by pulmonary phagocytes.

Effect of Pneumothorax and Duration of Illness

Those who have studied the course of the pneumonias recognize not only the great similarities but also the marked differences in their course and duration. The natural duration of the pneumonias is shown in Chart IV for recovered cases who were treated without specific therapy for a number of types. It may be seen that sometimes the disease terminates early and sometimes late, and that for each type, there seems to be a special habit. Only when we have a sufficient number of cases of each type and study the distribution of the duration shall we be certain of the effect of this treatment on length of illness.

The pneumococcus type and the treatments are given in Chart V for our

CHART III—TERMINATED WITH STRIPTOCOCCUS HEMOLYTICUS BLOOD INVASION.

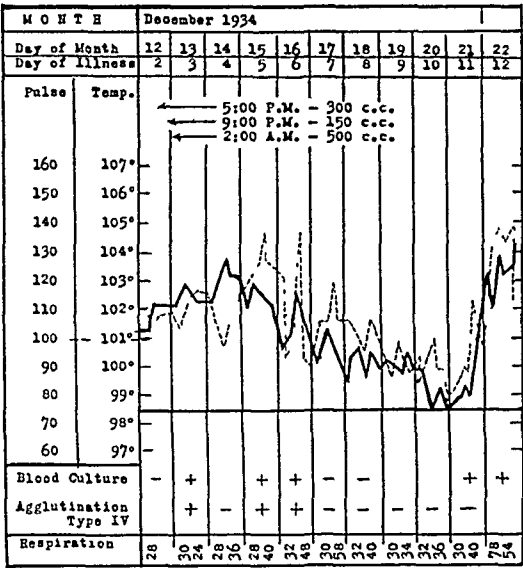
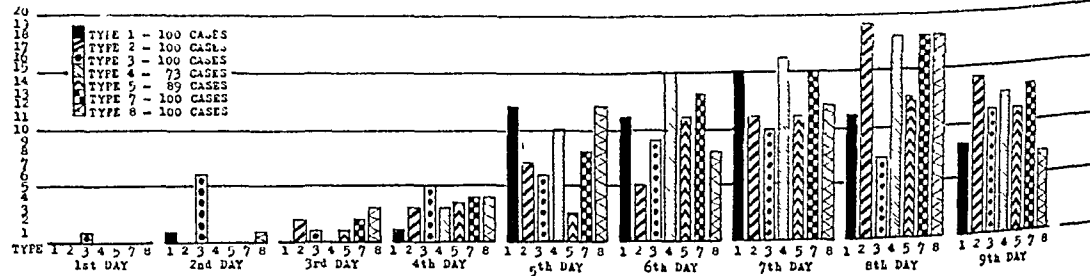


CHART IV—DAY OF TERMINATION OF RECOVERED NON-SERU



patients. We may say, however, that from the evidence in the literature and from the cases reported to us by others and from my own cases, that the duration of the diseases apparently has not been materially affected by pneumothorax therapy. Robertson agrees with this finding. Table II gives the day of termination of the disease in my cases listed by the day on which collapse therapy was initiated. It will be seen that the day of termination did not depend on the day of

induction but rather on the day when one would expect immunity. This is also shown in Table III which gives the manner of termination. Some of the cases terminated by lysis and some by crisis. Relatively few cases terminated in three days after induction of pneumothorax.

Effect of Character of Collapse

The character of the collapse did not affect the duration or promptness with which the disease terminated, as may be seen in Table IV giving the day of termination of cases with good, poor, and fair collapse. A patient with no collapse terminated promptly. Some patients with good collapse took longer to defervesce than some with poor or fair collapse.

Occurrence of Agglutinins

When the presence of agglutinins was studied, as in Table V it was found that they appeared at the times defervescence was expected and occurred. When de-

TABLE II
Induced Pneumothorax in 37 Cases

Day of illness disease terminated	Recovered							Died						
	Day of Disease							Pneumothorax Commenced						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
1														
2	1	1												
3	1	1												
4				1*						1				
5		1*		1*										
6		1		1										
7		2		4										
8				2										
9				3	1									
10				1			1							
11			1											
12										1				
13														
14								1				1		
26														
?		1	1*						1*					

* Serum treated

* One case serum treated

TABLE III
Duration of illness as measured by elevation of temperature after induction of pneumothorax

Termination	Cases	Day											
		1	2	3	4	5	6	7	8	9	10	11	12-26?
Lysis	20		1	3	4	4	3				1	1	
Crisis	10		1	2	2	2	3						
Death	5		1	1							1		1
?	2												2*

* One left A.O.R.

One continuous with Empyema { Both recovered

TABLE IV
Induced Pneumothorax in 37 Cases

Duration after Pneumothorax Started	Poor Collapse		Fair Collapse		Good Collapse		No Collapse	
	S	NS	S	NS	S	NS	S	NS
	CD	CD	CD	CD	CD	CD	CD	CD
1 day							1	
2 days				1		1		1
3 "							1	
4 "					1	1	1	
5 "			1				5	
6 "							5	
7 "							3	
8 "					2	1		
9 "								
10 "							1	
11 "								
12 "			2			1		
13 "								
14 "								
26 "	1			1				

S = Serum treated
C = Cured

NS = Non-serum treated
D = Died

PNEUMOCOCCUS PNEUMONIAS IN SEVEN FREQUENT TYPES

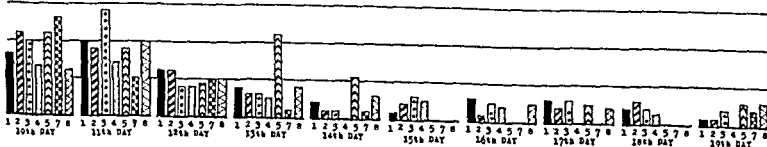


CHART V

RECORD OF 37 CASES OF INDUCED PNEUMOTHORAX

TYPE	1 ST DAY	2 ND DAY	3 RD DAY	4 TH DAY	5 TH DAY	6 TH DAY	7 TH DAY	8 TH DAY	9 TH DAY	10 TH DAY	11 TH DAY	12 TH DAY	13 TH DAY	14 TH DAY	15 TH DAY	16 TH DAY	17 TH DAY	18 TH DAY	19 TH DAY	REMARKS
WG 1					II			LY												
IR 1		I	III	ADR																
WW 1			III	I	CR															CONTRALATERAL INVOLVEMENT
AC 1		II	I		CR															
LW 1			I		LY															
JM 2		III		I	LY															
RG 2				III																
BH 2	III																			
HM 2			I	III					LY											
AF 2					LY															EMPYEMA
LH 3																				
GP 3	I	CR																		
CW 4		II																		
RH 4			II	II	I			LY												
MA 5			II	II				LY												
FP 5	III	II	I																	
OR 5		III	I																	
EM 7		I	II	CR																
AE 7						III					CR									
WR 8			II	I	I			LY												
JP 8	I	III	CR																	
FP 8		II	III					LY												
BM 8			I	III	I															
EM 8		III						CR												CONTRALATERAL INVOLVEMENT
RB 8		II	CR	I																
WB 9			II	I	I															
MJ 14				I	II															
WD 14		I	I	I				LY												
HC 14			II	I	I															
AW 15		II	DIED																	
WW 18			II	I				CR												
RE 18			I	III	I			CR												
NJ 32			II		LY															
GM X-GROUP			I	II																
FB B FRED																				
ES HEM STREP																				
EM 3+20			I	III				LY												

DIED
BLOOD POS FOR BOTH
TYPE 4 AND HEM STREP

I AIR INJECTED
↑ AIR REMOVED
‡ PRESSURE READING ONLY
CR TERMINATION BY CRYSIS
LY " " LYSIS
+ POS BLOOD CULTURE
- NEG " "
= SERUM GIVEN

AD WITH HEMORRHAGE

HEMORRHAGE STOPPED

AIR ALSO ON 20TH,
22ND, 24TH, 25TH DAY
LUNG ABSCESS

LUNG ABSCESS,
HEM STREP
MENINGITIS,
DIED 26TH DAY

NEPHRITIS WITH
ANASARCA

tested by our relatively crude methods, humoral immunity seems to go hand in hand with recovery. Cases who died did not develop agglutinins. One case had agglutinins on the first day and after therapeutic collapse, the temperature fell on the second day.

Bacteremia and Pneumothorax

The pneumococci of different types produce pneumonias which are quite distinctive in respect to the frequency of blood invasion. Invasion of the blood stream determines, to a large extent, the fate of the patient, and the successful treatment of pneumonia depends upon preventing bacteremia, and overcoming it when it is discovered. (It may be said in passing that it requires, at the very least, twelve hours to determine by cultural method whether the blood stream is invaded and many more to demonstrate that the blood was clear at the time the culture was taken.) The importance of bacteremia in causing death is shown for each important type separately up to Type XXII in Chart VI, which gives

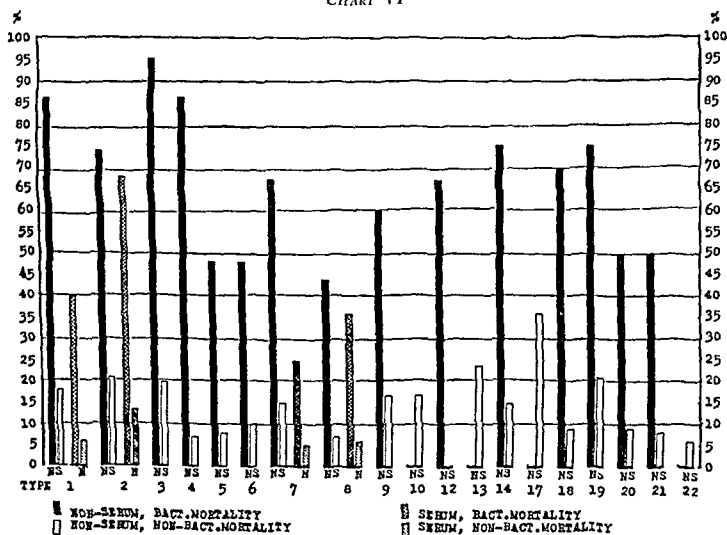
the death rate in bacteremic and non-bacteremic cases. The possibility of preventing bacteremia with serum is shown for Types I and II.

Coryllos and Birnbaum have stressed the importance of bacteremia from experiments on dogs in observations hither-

TABLE V
Induced Pneumothorax in 37 Cases

Days after first pneumothorax	Agglutination				N.D.
	-	+	+	-	
	+	+	+	-	
	Non-serum C.	Non-serum D.	Serum C.	Serum D.	C. D. C. D.
Same day	1				
First					
Second			2		
Third	2		1		
Fourth	1		1		
Fifth	3		2		
Sixth	1				
Seventh	2				
Eighth	1				
Ninth					
Tenth	1 (only agt taken)				
Total	12		6		9 3 5 2

CHART VI



NOTE—SERUM CASES OMITTED EXCEPT TYPES 1, 2, 7 and 8.

to unpublished (to be given in the discussion). They found that the mortality rate closely paralleled the incidence of bacteremia.

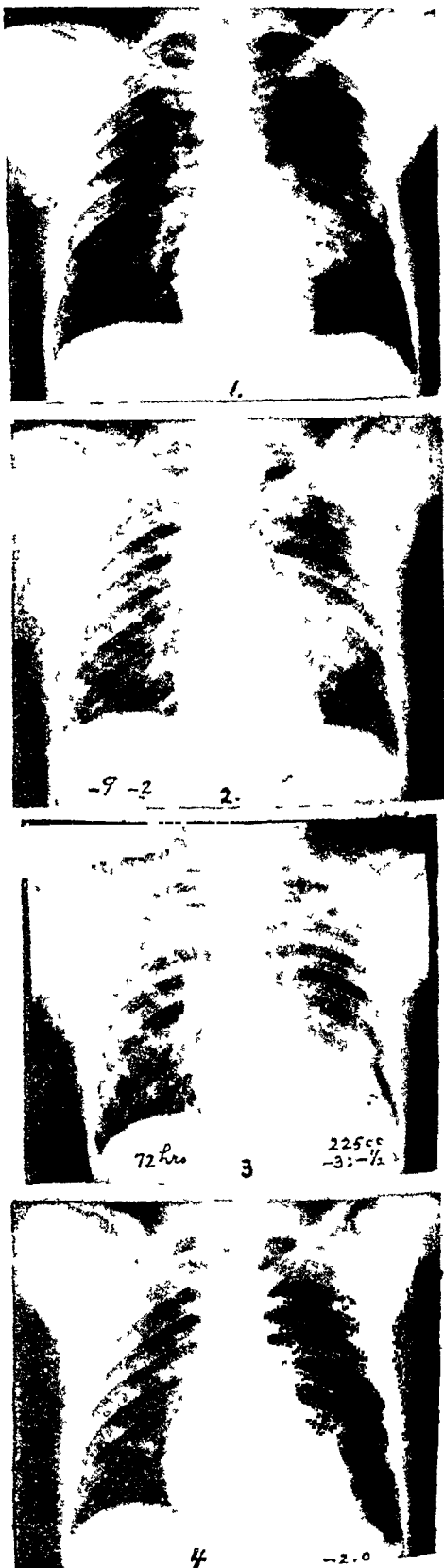
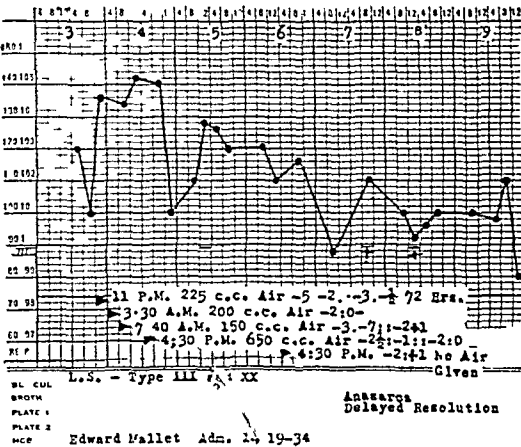
In our cases, bacteremia was present five times before induction of pneumothorax and supervened five times after pneumothorax was performed. (See Table VI) (a) Of those in whom it was present prior to induction, three were Type II cases. Among the five Type II cases encountered, two developed empyema although treated with serum; one case not treated with serum died. The cases that recovered without serum were a Type VIII and a Type XXXII. Type VIII bacteremia patients relatively, frequently (40%) clear the blood stream spontaneously. Patients with Type XXXII have always recovered in our experience (b) Of the five cases who developed bacteremia after pneumothorax induction, one was a Type I nonserum case. He received pneumothorax on the first day. His bacteremia ceased spontane-

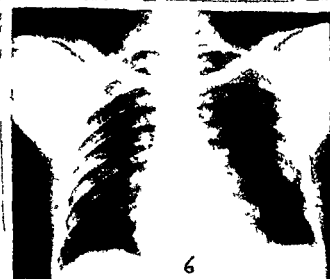
TABLE VI
Induced Pneumothorax in 37 Cases
Occurrence of Bacteremia

	Non-serum		Serum	
	No cases	Type	No cases	Type
Bacteremia present prior to induction	1	XXXII	1	II
	1	VIII	1	II
	1*	II		
Bacteremia appeared after induction	1*	I	1	V
	1*	III	1*	Hem strep
	1*	IV and Hem strep		

* Fatal

CHART VII





ously, and he became delirious. Because of pain, he left the hospital and was cared for at home. One had a *Pneumococcus* Type V. He received serum after he developed a contralateral lobe involvement. (This case will be narrated later in detail.) One was a Type IV who subsequently died with a concurrent streptococcus hemolyticus invasion. The other was a hemolyticus streptococcus pneumonia with subsequent abscess and meningitis. One was a patient with Type III. The lung was not collapsed but the mediastinum was displaced. She was overwhelmed by her bacteremia.

In our study of pneumothorax therapy, we selected only adult patients. Our experience with pneumothorax in children, as it occurs spontaneously or from trauma, has been that it does not affect the course unless it has been bilateral or was of the tension variety as occurred in a recent post-measles case when air had to be removed.

Pneumothorax and Toxic Symptoms

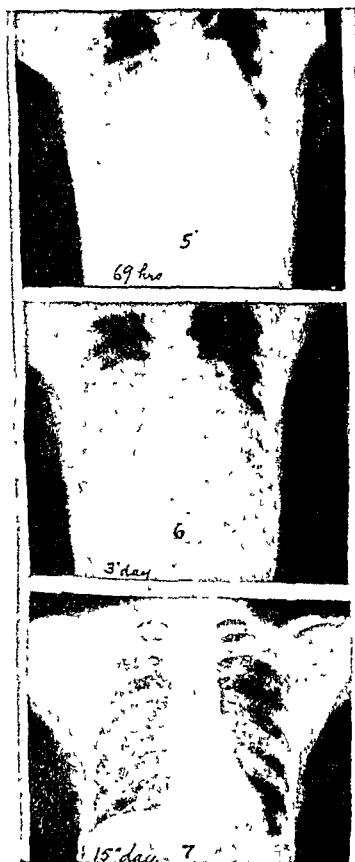
One of the claims made for the pneumothorax treatment is the reduction of toxic symptoms. In pneumonia, toxicity is a very difficult matter to gauge. Anoxemia competes with toxicity in producing symptoms. Most of the so-called toxic symptoms are associated with bacteremia. In our cases, certain symptoms occurred in what seemed more than usual frequency, especially in the cases which were not promptly terminated, as shown in Table VII of the occurrence of dyspnea, orthopnea and delirium. The delirium rate was greater than with serum. In Type I cases, delirium occurred in 18.5 per cent of non pneumothorax cases and in 40.5 per cent of all our pneumothorax cases.

Delayed effects of absorption were not mitigated, as shown in the case of E.M., who developed severe tubular nephritis.

TABLE VII
Therapeutically induced pneumothorax in 37 Cases

Symptom	Subsequent to Pneumothorax Induction					
	Appeared Cases	%	Increased Cases	%	None Cases	%
Dyspnea	13	35.1	5	13.5	19	51.4
Orthopnea	2	5.4	0	0	35	94.6
Cyanosis	11	29.7	1	2.7	25	67.6
Delirium	15	40.5	0	0	22	59.5

statistically significant. This has been demonstrated by us in the case of Type I and confirmed in Massachusetts and in England. We agree with Blake that pneumothorax has no effect on bacteremia. Delay to determine the presence of bacteremia before administering serum, causes the use of more serum than would have been otherwise necessary, and may even permit the patient to be overwhelmed.



We lost no cases of Type I pneumonia given pneumothorax although this may be attributable to the prompt use of serum, especially in the case of W.W., who had an invasion of the contralateral lobe.

W.W. 26 years, was admitted to Harlem Hospital with moist rales throughout both lungs and dullness with diminished breath sounds at the right base. His pulse was 136, respirations 44, and his temperature 104. His white blood cell count was 26,400; polynuclears, 85 per cent. X-ray showed a consolidation in the lower portion of the right lower lobe; the remainder of the lung fields were clear. The sputum revealed *Pneumococcus* Type I (Neufeld).

At 3 P.M. a pneumothorax was performed with the administration of 150 c.c. of air. A radiogram taken after this pneumothorax showed a slight amount of air below the consolidated lung. At 8 P.M. the temperature and pulse fell, the pulse being 114, the temperature 100 and the respirations 36. At 8 P.M., 375 c.c. of air was administered. The pressure reading changed from minus 5 minus 1 to minus 3 plus 1, and there was considerable relief of pain. At 11.45 P.M. an additional 425 c.c. of air was administered and the pressure readings were minus 4 plus 1½. During the night the temperature rose to 106 and the pulse, which had reached 130, was 118. Another radiogram, taken during the night, showed a well collapsed right lower lobe, a partially expanded right upper lobe and a definite involvement in the central portion of the left lung field. There were signs of consolidation in the upper portion of the left lower lobe.

The same may be said of the case of *Pneumococcus* Type V with contralateral lobe involvement (See Chart VIII).

F.P. came in with a pneumonia of his left lower lobe. On the first day of his disease this was found to be due to *Pneumococcus* Type V. He was not particularly ill. The lung was collapsed. There was no effect on the temperature or pulse. Next morning the patient complained of severe bilateral pain and marked dyspnea. The heart was markedly displaced to the right. 500 c.c. of air was removed from the left side with considerable relief, and a radiogram taken several hours later showed a marked involvement of the left lower lobe. The patient was markedly dyspneic and orthopneic even in an oxygen tent, and actively delirious. The blood which had been sterile became invaded. Very large and frequent doses of Type V serum caused the temperature to fall. Agglutinins ap-

peared in the blood stream, the pulse and temperature fell to normal and the lungs cleared.

The patient with Type VIII whose contralateral lung was infected was not severely ill and had a capacious chest. This was also the experience at the Hospital of the Rockefeller Institute where a Type VIII case became contralaterally invaded and recovered without serum. (Dr. Abernethy)

Evaluation

How shall we appraise the value of pneumothorax treatment of the pneumonias? Shall we use the results of treatment as a yardstick to compare the mortality with untreated cases due to the same pneumococcus type, or shall we compare the results with the best competing treatment? Shall we judge it by its effect on symptoms, or by its ability to overcome the great lethal factor in these diseases—bacteremia?

If one studies the literature, it is amazing to find the slim evidence on which pneumothorax is recommended. Coghlan,¹² whose report in *The Lancet* in 1932 is responsible for the present interest and which produced the recent contributions on this subject, reports six cases with one death. The charts are quite similar to many cases of unmolested pneumonia observed on our service with crisis on the fourth to the eighth days. In one case there was a death, and in one, crisis was attributed to the introduction of 10 c.c. of air.

Careful x-ray studies of the collapse of the lung, of the type and of blood invasion are lacking, nor is the diagnosis of pneumonia always clear-cut and adequately confirmed. Some writers, as David Li¹³ and Henius¹⁴ report the use of therapeutic pneumothorax in children and adults together, despite the very great difference in the mortality from the pneumonias in these two groups. Li reports as a favorable result, a case where pneumothorax was employed on the 16th day, and crisis occurred on the 18th. Klotz¹⁵ did not have a lobar pneumonia in his series and one of his four cases, a child of five, died. Groom and Gilbert's¹⁶ case was a tuberculous pneumonia. In the literature, only the cases of Blake have been adequately studied. Under date of April 29, 1935, he wrote me:

Of the eighteen Type I cases, six died (30%). All but one of these six cases were in the late fourth-day group. You will recall that we do not feel that pneumothorax treatment is of advantage as late as this in the disease. Three of these cases received Type I serum. The fatal cases on the last chart had a bacteremia at time of admission before commencement of treatment.

Among 239 cases of pneumonia due to *Pneumococcus* Type I treated at Harlem Hospital during eight years with serum and without pneumothorax on the fourth and fifth day of disease, there were 33 deaths (13.9%). At the Hospital of the Rockefeller Institute, two of their three Type I pneumothorax cases received serum, and all three patients recovered.* Patients alleged to be suitable for pneumothorax treatment by reason of earliness in illness, if they suffered from *Pneumococcus* Type I and were treated with serum, would have little or no empyema.

A great objection to the treatment of mild cases of pneumonia with pneumothorax is that the essential elements of the pneumonia problem are overlooked. Such cases recover in spite of reduced respiratory surface. Determination of type of pneumococcus by examination of sputum and blood should not be omitted or delayed by the physician who treats pneumonia.

On the immunity mechanism the mechanical collapse of the lung has no effect. Immunity can be given by serum. There is now serum commercially available for three different types of pneumococci. At least nine additional sera have been studied, and some give promise of value. These have been prepared by the Department of Laboratories of the Health Department, New York City, and studied through the additional generous support of Mr. Lucius N. Littauer, the Metropolitan Life Insurance Company and the Altman Foundation, Inc. The work is costly and results would be obtained sooner if more and better serum were available, but this requires additional financial support. The direction of pneumonia study should not be diverted from its present fruitful direction of securing

* Letter from Dr. T. J. Abernethy, Resident Physician, April 29, 1935.

means of protecting the blood stream from pneumococci, and clearing it after they are present. The fatality rate and the blood invasion rates are usually parallel. Whether cure of bacteremia is to be accomplished by sera or ferments is immaterial. The problem of pneumonia has not yet been made susceptible to a surgical maneuver but remains a problem in immunity, which requires trained careful clinical and bacteriological study and differentiation.

Summary

Pneumothorax induction immediately relieves severe pleural pain. This may also be accomplished by other methods and occasionally by such a slight pneumothorax that is not visible radiographically. This occurred ten times in a single year on the performance of routine lung suction for diagnosis among 400 patients. Pneumothorax may be induced accidentally as the result of lung aspiration without apparent change in the course of the disease. There is an ample margin of safety and with a capacious chest, one lung may provide sufficient surface for gas exchange. The relief of pain may be followed by oppression and soreness in the chest. Contralateral involvement may occur, or be present and in that case the pneumothorax increases the anoxemia. Displacement of the mediastinum may occur and require relief. Pneumothorax has no effect on the immunity mechanism

and does not prevent or cure bacteremia. The disease may not be shortened.

The symptoms of anoxemia are more frequent and more severe in some pneumonia patients with pneumothorax. The performance of pneumothorax does not absolve the physician from the responsibility of promptly determining the type of pneumococcus involved and the use of available specific sera of proven value to prevent and cure bacteremia. Early use of serum in pneumonias due to *Pneumococcus* Type I prevents empyema. The treatment is not one for the home, and while being evaluated should only be employed with x-ray guidance by those accustomed to pneumothorax therapy and its hazards and by those familiar with the pneumonias and equipped to study their problems.

Addendum

Six additional patients suffering from lobar pneumonia have received therapeutic pneumothorax with results essentially like those reported. Accordingly, our impression remains that though defervescence may occasionally follow induction of pneumothorax in pneumonia in many cases fall of temperature may have been a coincidence. To us it seems that inherent hazards outweigh the advantages alleged by advocates of the treatment.

The additional cases are briefly presented in chronological sequence. (See Table VIII) 62 West 87th Street

TABLE VIII

Initials and Hosp No	Sex	Age	Lesion	Pn Type	Admission Rating	Hour after onset of 1st collapse treatment	Character of Collapse	Day Temp Normal	
IG-54122	M	44	RLL	III	85	31st	Good	3	
RE 53779	M	19	RLL	VIII	90	33rd	"	5	
FG-53935	M	21	RLL	V	70	33rd	"	9	Temp range 104 105 P 120 Agt + on eighth day Severe local chest pain
PE 54327	M	22	RLL (in chains)	I	80	34th	"	5	Agt + on fifth day
DM 54578	M	24	RLL	VI	80	12th	"	7	Temp range 102 105 P 120 Exu date in pleura lung showed no tendency to expand until air was removed
JN-54810	M	43	RLL	IX	75	25th	"	Temp continuous with subsequent Empyema	Relief of chest pain but complaint of local pain at site of aspiration

References

1. Moore, Richmond L.: The Volume of Blood Flow per Minute through the Lungs following Collapse of one Lung by Occlusion of its Bronchi, *Arch. Surgery*, 22:225, 1931.
2. Torning, Kjeld: Experimental Pneumothorax, *Acta Tuberculosa Scandinavica* VII: fasc. 3-4, 1933. VIII: fasc. 1-2, 1934.
3. Coryllos, P. N., and Birnbaum, G. L.: *Arch. of Surgery*, 19: Part 11, p. 346, 1929.
4. Means, J. H., and Balboni, G. M.: Various factors of respiration with pneumothorax, *Jour. Exp. Med.*, 24:671, 1916 (December).
5. Fine, Jacob and Drinker, Cecil: *Arch. Surgery*, 22:495, 1931.
6. Bendove, Raphael A.: Vital Capacity in Artificial Pneumothorax, *Arch. Int. Med.*, 35: 94, 1925.
7. Adams, W. E., Hrdina L. and Dostal, L. E.: *Jour. Thoracic Surg.*, 4:377, 1935.
8. Tuttle, Wm. M., and Cannon, Paul R.: The Passage of Bacteria from the Lungs into the Blood Stream, *Jour. Infec. Dis.*, 56:31, 1935.
9. Neufeld, F., and Kahn, Helga: *Zeitsch. fur Hygiene Inf. Krankheiten* Band 116, Heft. 6, 697, 1935.
10. Bullowa, J. G. M., and Wilcox, Clare: Pneumococcus Chain Formation: Its Relation to Virulence in Mice, Occurrence and Distribution by Pneumococcus Types in Human Respiratory Infections, and its Relation to Prognosis in Labor Pneumonia, *Jour. Lab. and Clin. Med.*, 19:1156, 1934.
11. Stillman, Ernest G.: *Jour. Exp. Med.*, 52:215, 1930.
12. Coghlan, J. J.: *Lancet*, 1:13, 1932.
13. Li, K. H.: *Chinese Med. Jour.*, 46:769, 1932.
14. Henius, K.: *Deutsch Med. Woch.*, 47:7, 1921.
15. Klotz, M.: *Monatschrift f. Kinderheilk*, 42:312, 1929.
16. Groom, R. J. and Gilbert, D. N.: *Colorado Medicine*, 22:264, 1927.

Discussion

DR. POL. N. CORYLLOS, *New York*—My contribution to the discussion shall be limited to the experimental aspect of this question, and to its relation to the pathogenesis of pneumococcus lobar pneumonia as I understand it.

Dr. Birnbaum and myself have studied the influence of artificial pneumothorax in labor pneumonia induced in dogs. A detailed report of this work which was carried on in the Department of Surgical Research of Cornell Medical College is about to appear in the Archives of Internal Medicine. I shall present only a brief resume of the results obtained.

Forty dogs were used. Lobar pneumonia was induced by the bronchoscopic technic devised and described by Coryllos and Birnbaum in 1929. Twenty to thirty c.c. of 18 hour old culture in broth of pneumococcus Type I were centrifuged and the sediment suspended in 1 c.c. of broth. By means of bronchoscope, the mouth of the bronchus of one of the lower lobes was located and the suspension was injected into it through a 2 mm. brass tube. In a number of animals the sediment was mixed with 1½ per cent agar or starch broth. In all cases intraperitoneal anesthesia was used (Amytal 55 mgm. per kilo. body weight).

Blood cultures were made of all animals. 24 hours after injection of the pneumococcus culture 2 c.c. of blood were taken from a peripheral vein and poured in agar plates. At autopsy as soon as possible after death cultures were taken from the heart.

Of the 40 animals used in that investigation 17 received pneumothorax (250-500 c.c.), and 23 served as controls. 3 were moribund and in coma 24 hours after-inoculation, and all 3 were bacteremic. 2 were left untreated and one received pneumothorax. All 3 died.

Six animals, 3 with and 3 without pneumothorax, died between the 30th and 112th day after inoculation; 4 of these animals were bacteremic at the start. Only in one of these 6 animals were gross pulmonary lesions found at autopsy.

A distinction should be made between the very toxic and the slightly toxic animals. 26 of the 40 dogs were very toxic and 14 slightly or not at all toxic. We gave pneumothorax to 15 toxic and 2 slightly toxic, and used 11 toxic dogs as controls, two of which were moribund, and 12 moderately or slightly toxic. This was done because long experience with experimental pneumonias has taught us that slightly toxic animals as a rule recover spontaneously. It was therefore interesting to submit dogs, with rather severe unilateral pneumonia, to pneumothorax treatment.

Our results do not corroborate the findings of the experimental work of Lieberman and Leopold. These authors obtained recovery in 15 out of 18 pneumonia dogs treated with artificial pneumothorax, whereas of the 18 untreated controls only 3 recovered and 15 died.

In our work, the mortality was not influenced at all by the induction of pneu-

mothorax; it ran parallel to the presence or absence of bacteremia.

Of our 40 animals 24 had negative cultures. Of them 21 (87%) recovered and 3 died (13%). On the contrary 16 had positive cultures, and of them only 3 recovered (19%) and 13 died (81%). (Table I.)

If now we consider more especially our 26 clinically toxic animals (Table II) we find that 12 had negative cultures and 9 of them recovered (75%) and 3 died (25%) whereas of the 14 with positive cultures only 2 recovered (14%) and 12 died (86%).

This shows that the incidence of bacteremia matched the incidence of mortality—40 per cent for both in the total number, and 54 and 57 per cents respectively in the toxic group.

Of the 26 toxic and perfectly comparable animals, 15 received pneumothorax and 11 served as controls. We purposely did not include the slightly toxic animals in order to deal with animals presenting clinically and bacteriologically comparable pneumonias (Table III). As we shall see, this was not done in the work of Lieberman and Leopold, which explains the apparent discrepancy between their results and ours.

Of this group 15 had pneumothorax; 9 died (60%) and 6 recovered (40%). Of the control animals 6 died (55%) and 5 recovered (45%). Consequently there was no marked difference.

A closer study of the influence of pneumothorax upon animals with and without bacteremia and a comparison of the results obtained in them with the results observed in the controls (Table IV), shows that of our 15 animals which received pneumothorax 7 were negative and 8 positive. Of the 7 negatives, 3 died (29%) and 5 recovered

TABLE I

*Incidence of bacteremia to incidence of death
(total group)*

Total Number	40	24 Negative—3D,* 21R (87% recovered, 13% died)	16 Positive—13D, 3R (19% recovered, 81% died)
Incidence of bacteremia	40%		
Incidence of death	40%		

* Died ** R—Recovered

TABLE II

*Incidence of bacteremia to incidence of death
(toxic group)*

Toxic	26	12 Negative—3D, 9R (75% recovered, 25% died)	14 Positive—12D, 2R (14% recovered, 86% died)
Incidence of bacteremia	54%		
Incidence of death	57%		

TABLE III

Incidence of highly toxic animals in pneumothorax and non pneumothorax groups

Pnx (15)	Moribund and very toxic (12 cases) Moderately toxic (3 cases)	Ratio is 4:1
No Pnx (11)	Moribund and very toxic (9 cases) Moderately toxic (2 cases)	Ratio is 4½:1

TABLE IV

*Incidence of bacteremia to incidence of death in pneumothorax and non pneumothorax groups
(Analysis)*

Toxic 26	Pnx 7 Negative—2D, 5R (71% recovered, 29% died)	(15) 8 Positive—7D, 1R (13% recovered, 87% died)
No Pnx 5	Negative—1D, 4R (80% recovered, 20% died)	(11) 6 Positive—5D, 1R (17% recovered, 83% died)

TABLE V

Incidence of bacteremia to incidence of death in pneumothorax and non pneumothorax groups Analysis 2

Toxic 26	Pnx Fatal cases—7 of 9, or 78% had bacteremia (15) Recoveries—1 of 6, or 17% had bacteremia
No Pnx	Fatal cases—5 of 6, or 83% had bacteremia (11) Recoveries—1 of 5, or 20% had bacteremia

TABLE VI

*Incidence of bacteremia and death in non toxic group
irrespective of pneumothorax*

14 slightly or not toxic at all	(2 positive, 1R, 1D) (12 negative, 12R, 0D)
Incidence of bacteremia	14%
Incidence of death	7%

Incidence of pneumothorax, bacteremia, recovery and death in non toxic group

Pnx 2—1 positive, died 1 negative, recovered
14 slightly or not toxic at all
No Pnx—1 positive, recovered (12) 11 negative, recovered

TABLE VII

From Lieberman and Leopold—(*Amer J of Med Sc.* 187 315, 1934)

Table 2—(page 320)
Pneumothorax Dogs, that recovered (15 out of 18) (81%)

Blood Culture negative—9 60 0
Blood Culture positive—6 40 0

Table 4—(page 328)
Untreated Dogs that died (13 out of 18) (72%)

Blood Culture negative—4 30 0
Blood Culture positive—9 70 0

Of these animals 12 died within 3 days

(71%) whereas of the 8 positives, 7 died (87%) and only 1 recovered (13%). Of the 11 controls, 5 were negative and 6 positive. Of the former, only 1 died (20%) and 4 recovered (80%). Whereas of the 6 positive, 5 died (83%) and only 1 recovered (17%). Again we find that pneumothorax had no effect: these final results depended upon the presence or absence of bacteremia.

If we compare the incidence of bacteremia to the incidence of death in the pneumothorax and the non-pneumothorax groups (Table V) we find that in the pneumothorax group 7 of the 9 fatal cases had bacteremia (78%) and in the control group 5 of the 6 fatal cases (83%) also had bacteremia. Conversely of the cases that recovered, with pneumothorax 17 per cent only had bacteremia and of the controls 20 per cent had positive cultures.

In the non-toxic group, 2 were treated with pneumothorax. One was positive and died; the other was negative and recovered. Of the 12 non-toxic controls one was positive and 11 negative; all recovered (Table VI).

Let us now study the tables of Lieberman and Leopold. We find that in their Table 2, concerning the dogs treated with pneumothorax that recovered, 40 per cent had positive cultures whereas of the untreated dogs that died, 70 per cent had positive cultures. Furthermore 12 of these animals were so toxic that they died between 24 and 72 hours; at the most, 24 to 48 hours after pneumothorax could have been induced (Table VII).

As for the theoretical considerations of the possible influence of pneumothorax upon the course of pneumonia, I confess that outside of the possible relief of pain, due to the separation of the two favorable pleural layers, I am not ready to accept the opinion of Behrend and Cowper and Blake. Before entering any discussion upon this subject we must first arrive at an understanding of the pathogenesis of the disease. Blake does not admit the obstructive nature of lobar pneumonia. However, he offers no explanation of the decrease in size of the pneumonic lung and of the elevation of the

diaphragm, notwithstanding the considerable increase of the weight of the diseased lung. Neither does he offer any explanation of the crisis occurring between the 5th and 11th days, independently of the presence or absence of antibodies, or, of the abortive cases, or, of the unresolved pneumonias. I think that Birnbaum and myself have presented experimental and clinical evidence in favor of the obstructive theory of lobar pneumonia which so far has been corroborated by all investigators who have repeated our work and has been refuted by none. If this conception be true, it is not immobilization of the lung that is needed, but drainage, liberation of the obstructed bronchi, and ventilation of the lung. In the examples used by Behrend and Cowper of infectious arthritis, cellulitis and pleurisy in which, they say, rest is necessary, we shall answer that rest may be useful, but the most important factor for the treatment is drainage and the more promptly and skilfully it is instituted the better for the patient. On the other hand I do not think that any kind of comparison can be established between pneumonia and tuberculosis as attempted by the same authors. The pathogenesis of these two diseases and the biology of their respective pathogenic micro-organisms is quite different. If we desired to compare the action of pneumothorax on pneumonia with its action on another suppuration of the lung it would be more reasonable to compare it with abscess of the lung, putrid or not, or to bronchiectasis. In these diseases also, pneumothorax was advised with no less enthusiasm than it is in pneumonia today. We know what the results of the use of this treatment have been.

In conclusion, I would say without any intention of being dogmatic, that I do not believe that the fundamentals of pathologic physiology of the pneumonic lung, or the experimental findings are in favor of treatment of lobar pneumonia by artificial pneumothorax. Therefore I was greatly interested in hearing that Dr. Bullowa, in his thorough clinical investigation of this question, had arrived at the same conclusion.

PERFORMING SURGICAL MIRACLES

Transplantation of a toe to replace a forefinger lost in an accident was demonstrated by Prof. M. I. Kuslik of the Vreden Traumatological Institute at the meeting of the Leningrad Surgeons' Society, according to the *Science News Letter*. The patient can

now bend his forefinger, which used to be the second toe on his foot, at will. Prof. Kuslik followed the transplantation technic devised by Prof. Vreden which has been successfully used in three other cases that are similar.

THE TREATMENT OF OCULAR AFFECTIONS WITH GOLD SODIUM THIOSULPHATE

IVAN J KOENIG, M D, *Buffalo*

There are many ocular conditions in which the etiological factor is not demonstrable. The cause of such cases is usually catalogued as one of unknown origin. When thorough investigations do not reveal anything specific, our therapeutic attack must be empiric and with all known measures. The better known methods are usually first thought of and the uncommon measures are frequently overlooked. Several such cases came to our attention and as often develops, we became desperate in our therapeutic endeavors.

It was during the course of treatment in several chronic ocular inflammatory conditions that we began using gold sodium thiosulphate intravenously.

The chronic type of uveitis is particularly responsive to gold therapy. Not infrequently these cases, because of their non responsiveness to therapy, are diagnosed as tubercular.

The diagnosis of ocular tuberculosis in many conditions is concluded only from observation and is not proven by time-honored laboratory methods. In cases of this type one clinician may advise non-specific foreign protein and another may recommend tuberculin therapy and often time neither treatment brings the desired response. It is for this type of case that intravenous administration of gold sodium thiosulphate is advocated.

We began intravenous gold therapy after observing a young Filipino who entered the Buffalo City Hospital June 9, 1932 with a history of a gradual blurring of vision in each eye. Examination of the eyes revealed no abnormality externally. Corneae were clear. The slit lamp showed clear anterior chambers and clear lenses. The vitreous presented a dense haze of flocculent opacities. A very faint fundus reflex could be seen but no fundus detail observed.

Physical examination was essentially negative except for a positive reaction to 1 minum of a 1-10,000 O T intradermal

injection. A focal reaction could not be seen. The visual acuity was 6/60 in each eye.

The treatment consisted of dionin and sub conjunctival injections of saline solution and KI to the point of tolerance along with a vigorous course of purgatives. Two months later there was no improvement in vision and the vitreous appeared the same.

About three months later on August 23, he was given 10 mgm of gold sodium thiosulphate intravenously with subsequent weekly injections of increasing doses. After two weeks there was a subjective improvement in vision. Injections were continued weekly with increasing doses up to 100 mgm. We gave fifteen injections to a course with a month of rest, and repeated them as long as there was improvement in the visual acuity. On August 1, 1933, a year later, the visual acuity had increased to 6/9 and corrected to 6/6. At this time the fundus had cleared and we were able to observe extensive areas of retino chorioidal atrophy at the extreme periphery.

The results of this therapy were so startling in this instance that we continued to choose cases with dense vitreous opacities causing a decrease in the visual acuity, and after these cases would not respond to other therapy.

The use of gold as a therapeutic agent is an old one. One of the first references to it dates back to the beginning of the eleventh century when Avicenna recommended it as a blood purifier. In the early sixteenth century, Paracelsus used gold and mercury in a solution and called it the "Elixir of Life" which was supposed to cure all diseases. At various times it has been brought into prominence as a valuable agent against the tubercle bacillus and then discarded again. Robert Koch in 1890 announced that gold cyanide had a high inhibitory action on the tubercle bacillus. In dilutions of

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1-2,000,000 the growth of this organism was inhibited on artificial media but had no influence in the animal body. Bruck and Glueck in 1913 reported good results in the treatment of lupus erythematosus and it is now used extensively by dermatologists for that condition. Mollgaard of Denmark in 1924 attracted great attention by reviving the use of gold as a cure for tuberculosis. Much discussion arose and many articles have appeared in foreign literature since that time claiming both good and poor results. The preparation used by Mollgaard was gold sodium thiosulphate, also known as sanocrysin. Authorities using the preparation reported observing marked reactions after giving large doses which caused complications for the patient. These reactions consisted of gastrointestinal upsets, stomatitis, dermatitis, renal disturbances, and at times jaundice. Mollgaard explained them as a liberation of toxin from destroyed tubercle bacilli which would be followed by improvement in the patient's condition. Others claimed them due to a heavy metal reaction to which some patients are particularly sensitive. This latter seems more probable because the symptoms vanish with the discontinuance of treatment.

The use of gold in ocular conditions, according to literature, began in Europe. Abramowicz¹ in 1927 published results of experiments with gold sodium thiosulphate, using the solution by a method of electrolysis. In seven experiments he was able to introduce sanocrysin into the eye electrolytically, and the presence of gold was noted in the anterior chamber.

Sander-Larsen of Copenhagen in 1928³ reported treating seventy cases of iridocyclitis intravenously with sanocrysin and other gold preparations. Most of these cases were tubercular. Gold was used after the tuberculin treatment had reached its height with a focal reaction, and good results were reported in both the local and general condition of the patients.

Stoewer⁴ of Berlin in 1928, reported treating tubercular cases with gold (Krysolgan) in cases that did not respond to tuberculin. He reports that absorption of exudative processes was rapid after use of gold. C. Winkler-Prins, Jr.^{5, 6} in 1928 reported a study of leukomatous corneae resulting from tubercular infiltrations

which were treated with sanocrysin intravenously after which deposits of gold were found histologically in the cornea. They were found just outside the walls of the blood vessels and these deposits were always intracellular.

In 1930 Hoffman⁷ divulged beneficial results in treating eye complications in leprosy with Cryolgan, another gold preparation.

Benedict and Goeckerman⁹ in one of the few references in American literature gave a very comprehensive routine for the treatment of uveitis. They advocated the use of gold sodium thiosulphate in cases where the acute signs had subsided or in the chronic type of case not necessarily tubercular. Six cases were reported, and all showed evidence of improvement.

C. M. Berro and P. Cantonnet Blanch⁸ in 1932 reported a case of phlyctenular keratitis which cleared up with intravenous gold therapy after resisting other forms of treatment.

Another use of gold sodium thiosulphate is reported by E. Stastnik.¹⁰ He gave intravenous gold along with other therapy in cases of optic atrophy, five cases of tabetic, two of post neuritis and one case of cerebral lues. Definite improvement was noted in the visual acuity and also color perception.

In considering the indications of gold therapy in ocular conditions it would seem that value may be found in its use when given in the chronic type of case that may or may not simulate a tubercular process.

Another of our early cases is that of a white female aged 60, who on August 22, 1932, had an intracapsular extraction of a mature cortical cataract of the left eye. Her convalescence was uneventful except for a low grade iritis which was easily controlled and the patient was discharged from the hospital on the tenth day.

On October 6, 1932, refraction was done which with a +12.50 +200 ax 170 gave 6/9. Lenses were given for constant wear. On November 1, 1932 the patient returned complaining of blurred vision, it being 6/15 with correction. Examination revealed cellular deposits on the posterior surface of the cornea with a cloudy anterior chamber. Foreign protein was given intermittently for six weeks in addi-

tion to potassium iodide and local treatments of atropin sulphate and diosmin with no improvement objectively or subjectively. Physical examination revealed a hypertension with vascular changes, a slight secondary anemia, also some emaciation, a trace of albumin in the urine with an essentially normal blood chemistry. Mantoux reaction (1-10,000 mg O T was 2+).

This patient was started upon gold therapy with an initial dose of 10 mgm on December 30, 1932. The treatment was continued for 8 doses with increasing amounts each week. The development of a slight dermatitis was the reason for withdrawing intravenous treatment. However, her visual acuity had improved 6/9 again with the same correction by this time.

In addition to the improvement in vision, there was a gain of ten pounds in weight and all through her course there was a general feeling of well being which the woman had not had in months.

Other cases selected for this treatment were cases of dense vitreous haze, some being exudative and others hemorrhagic. In all cases intravenous gold was used only after other forms of treatment and the elimination of foci of infection failed to bring about any improvement. Several cases of severe iridocyclitis were treated after the acute symptoms had subsided and a vitreous haze remained causing a diminution in visual acuity. These vitreous exudates seemed to absorb more readily after gold was used.

An example of a case of this type was R. H., male, aged 43, who had had a supposed sympathetic ophthalmia of the left eye since July, 1922, following an injury to the right eye. Since that time he had been under intermittent hospital care with attacks of severe iridocyclitis about once a year. The right eye had been enucleated shortly after the accident following an iridectomy by the late Lee Masten Francis, who made the diagnosis of sympathetic ophthalmia which was corroborated clinically by many other ophthalmologists. This patient has been under my observation since 1923. The failure of the right eye to respond to iridectomy made it inadvisable to attempt a similar procedure on the remaining eye.

The periods of hospitalization varied

anywhere from six to eight weeks. In addition to the usual local treatments he was given various non-specific foreign proteins including milk, diphtheria antitoxin in small doses as well as the larger doses advocated by Verhoeff, autogenous vaccines from teeth, and typhoid vaccine. The latter seemed more efficient in relieving the acute symptoms than the others which had been given in previous years. There had been little change in the appearance of the eye during the attacks, all of which seemed alike. The findings were typical of a very severe iridocyclitis. The endothelial surface showed large grayish white deposits, a turbid aqueous, extensive posterior synechia, and exudation into the vitreous. The uncorrected visual acuity was always 6/6 after each attack.

The last attack began January 17, 1933. After intravenous typhoid therapy the acute symptoms subsided more rapidly but the media remained hazy longer than usual. The visual acuity remained 6/15 for a period of three months. With the visual acuity apparently stationary gold sodium thiosulphate was given. After ten doses, the maximum being 100 mgm, his visual acuity improved to 6/9 which it held until another attack of iridocyclitis recently, which was not as severe nor as long standing as any of the other attacks. Physical examinations over a period of years revealed several positive findings, such as two infected teeth in 1927 and one anti-complimentary Wasserman in 1928, the others all having been negative. Through careful search no definite etiological factor had been demonstrated. In this case we felt that absorption of exudate from the vitreous was hastened by administration of gold intravenously.

Another case, F. W., female, aged 49, came to me for refraction in 1926, the corrected visual acuity being 6/5 in each eye. The external and fundus examination was negative except for slight evidence of early vascular sclerosis. On July 1, 1929, she again consulted me complaining of spots before her eyes. The corrected vision was 6/5 in each eye.

External examination was negative including a slit lamp study of the anterior segment. The fundi revealed string-like and fine opacities of the vitreous with no

lesions of retina or choroid. She was referred to her physician who reported a myocarditis with some vascular changes. Wasserman and Mantoux tests were both negative, and the blood chemistry was within normal limits.

The patient went to Europe during the summer and returned in September, 1929, with continued symptoms of photopsia. The corrected visual acuity was 6/6 in each eye. At this time she was using dionin, while sodium iodide intravenously was being started.

During the next year iodides, dionin and sub-conjunctival injections of saline solution were given at various intervals. The visual acuity became steadily worse. The opacities of the vitreous became more numerous and string-like.

On October 20, 1932, the visual acuity of the right eye was 6/15, of the left eye 6/12 and this would not improve with other lenses. At this time the opacities were quite flocculent and more massive than before.

Gold sodium thiosulphate was started intravenously. The initial dose of 10 mgm. was given and gradually increased to 100 mgm. Her visual acuity began to improve after the tenth injection. On December 28, 1932, the visual acuity with the same correction had improved to 6/6 in each eye, and the opacities of the vitreous had decreased both in size and number. The patient also stated her general condition improved after beginning gold therapy. The visual acuity, on her last visit, February 5, 1935, was 6/6 in each eye with the same correction.

A corneal lesion that showed response to gold therapy was found in P. S., white, male, aged 49, with a history of very poor vision in the right eye for years and the left eye for months. He came to the Buffalo General Hospital dispensary service on April 7, 1932. The right eye was quiet, showing a superficial corneal scar with dense vitreous opacities through which no fundus detail could be seen. The left eye presented many deep infiltrates of the cornea. On April 4, 1933, after exhausting all other therapeutic measures, we began the use of gold sodium thiosulphate intravenously. At this time the right eye was similar to the previous examination, but the left eye revealed dense surface scarring. In

the deeper corneal layers near the apex, there was a large white infiltrate about 3 mm broad which was rather sharply defined. The vascularization was quite marked. The eye continued to be irritable in spite of atropin and vaccine treatment which had been given. The diagnosis in this case was uncertain. I hesitate to call it more than a chronic keratitis. The cornea on this case began to clear of infiltrates after receiving five injections of gold, and the acute symptoms began to subside. A 1 per cent solution of atropin sulphate was the only other local treatment that had been continued. On May 23, 1933, the local treatment was discontinued and the eye was quiet. The infiltrates had absorbed, and only dense scarring on the cornea remained. The right fundus, too, was clearer. The vitreous haze had thinned so that we could observe areas of choroidal atrophy which prevented any useful vision on the right side.

On June 20, 1933 the eye remained quiet for a month without local treatment. This patient had fourteen intravenous injections of gold. In this case the eye remained quiet for several months. At a later date a recurrence developed, but I was unable to follow the case further.

We have tried gold therapy on many chronic ocular conditions which failed to respond to other routine treatment. The cases we find particularly responsive to therapy are those where exudation from the uveal tract has caused a hazy vitreous.

In the vitreous we have many different types of opacities. The etiology of such opacities, especially in people past middle life, is not always demonstrable. Some of them are hemorrhagic and others are exudative processes. Some other causes of such opacities are inflammation of the retina, and uveal tract, trauma producing hemorrhages from the choroid or ciliary region, and exhausting diseases, such as anemia, syphilis, tuberculosis, focal infections, constipation, congestion of the liver, mental disorders, vascular sclerosis and others.

One or more of these diseases, along with a hazy vitreous, may exist in an individual, and the treatment of these conditions many times fails to improve the visual acuity. It is not every case that will respond to the intravenous use of gold, but in the case where other thera-

peutic endeavor has failed, this treatment is worth considering

The complications noted in its administration were few. The most common was a stomatitis. The development of a dermatitis has been noted, and, in one instance, a gastrointestinal upset could be attributed to it. In a series of upward of thirty cases, complications were had in only five, all of which were eliminated by withdrawing the drug. Liver pathology is one that should be watched for, but in our cases it had not been observed.

The routine of administration we have been following recently is to start the individual with a dose of 10 mgm and to increase this to 25 mgm for a total of six weekly doses. The small initial dose is given to detect any sensitivity to the drug. At the end of the sixth treatment, the dose is increased to 50 mgm until a total of 15 doses have been given. Due to the fact that gold is excreted slowly, it is felt that the weekly injections are sufficient for metallic action. Also sensitivity can be

observed more readily by small and infrequent doses.

A month's rest is given after which the 50 mgm dose is again administered and if necessary continued for fifteen doses. If no improvement is noted in this time, the probability is that none will result.

It is not claimed that there is any specific action in gold for ocular tuberculosis or for any chronic uveitis, and it should not be used in place of other well-recognized procedures but merely as an adjuvant with other routine treatment.

The cases cited are mostly of questionable etiology but they have all shown improvement in the appearance of the existing pathology during the course of gold therapy. They are not presented to state conclusively that the improvement can be entirely credited to the use of gold sodium thiosulphate but are merely given to show the type of case which can benefit when gold is added to the more routine treatment.

40 NORTH STREET

References

- 1 Abramowicz, I. *Arch d'Ophthalmol* 44, January, 1927
- 2 Dewitt, L. M. *Warthin Annual Volume* P 299-304, 1927
- 3 Sander-Larsen, S. *Hospitalsid* 71 January 5, 1928
- 4 Stoever, E. *Klin Monatsbl f Augenh* 80 March 23, 1928
- 5 Winkler Prins, C., Jr. *Ann d'oculist Paris* 165 October 1928
- 6 Winkler-Prins, C., Jr. *Arch f Augenh* 99 November 1928
- 7 Hoffman, W. H. *Journal of Tropical Medicine and Hygiene* 33 August 15, 1930
- 8 Berro, C. M., and Cantonnet Blanch, P. *Arch de pediat d'Uruguay* 3 March 1932
- 9 Benedict, W. L. and Goeckerman, W. H. *Arch of Ophthal* 8 August 1932
- 10 Stastnik, E. *Ceskosl Ophthal* 1 1934 (Abst in 1934 Year Book.)

WHY AN AUXILIARY?

The campaign now well under way to form auxiliaries to the county and state medical societies gives point to the question raised in the *Wisconsin Medical Journal*, "Why an Auxiliary?" We might as well ask, "Why a Wife?" says the writer, who dips his pen in effervescent ink and gives us this:

Medical organization went on for nearly a century in a state of single blessedness. Like an old bachelor it never seemed to realize that it was doing many odd jobs which could be done by a helpmate and that its standing in the community was being sorely neglected. Then one spring morning some ten years ago came a comely lady, who announced herself as Mrs. Auxiliary, rolled up her sleeves, nudged Mr. Medicine

in the side, and said "shove over—I'm going to pitch in help get your house in order, and I'm going to be your partner."

The old fellow, unaccustomed to team work, grumbled and still sputters at times, but down in his heart realizes how efficient she has been. During the years she has grown and developed into a buxom housewife on whom he has learned to depend more and more. She has been helpful in more ways than he realizes and she can do more and more for him as time goes on and he learns more to rely on her. Her main job is to improve his standing in the community. He has been a hermit and has covered up his sterling qualities and his good deeds. He has had few contacts with others and she can do much in bringing about a better appreciation of his work and of his worth.

TRAUMA AND TUBERCULOSIS

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One year after the excision of a tuberculous epididymis, a man, aged 42, showed evidence of recurrence in the remaining epididymis and prostate. Following three months of conservative therapy, the patient felt well enough to go surf-board riding. A severe fall during this exercise was followed in three weeks by a widespread miliary tuberculosis and death. The family collected double indemnity insurance on the basis of traumatic death.

A housewife, aged 38, entered the accident ward of a municipal hospital, unconscious, from a probable fractured skull following an automobile accident. Consciousness was soon recovered followed by a three week's period of fever ranging between 102 and 104° F., tachycardia, sweats and dyspnea. Roentgenograms of the lungs, taken two weeks previous to admission to the hospital in the course of a routine physical examination, had shown no tuberculosis. Subsequent x-rays taken seventeen days after the accident showed a miliary tuberculosis of the lungs. Autopsy records revealed, aside from the miliary tuberculosis, a large caseous tuberculoma in the left frontal lobe, and no fracture of the skull. This family likewise collected double indemnity insurance on the basis of a traumatic death.

A superintendent of an apartment house, aged 46, fell four floors down an elevator shaft and suffered a severe injury to the chest, fracturing the left 6th, 7th and 8th ribs. This was followed by frequent pulmonary hemorrhages over a period of one year. The patient had had for three years, a slight cough and rare mucopurulent expectoration. Examination of the sputum subsequent to the injury showed on only one occasion two acid-fast rods, and although x-rays of the chest were negative, still tuberculosis was diagnosed. The patient had then been allowed compensation for a traumatic tuberculosis. When, at the end of two years, lipiodol

studies were made, extensive bilateral cylindrical bronchiectasis was revealed and the diagnosis of tuberculosis was then ruled out. Subsequently, a relationship between trauma and the aggravation of an old bronchiectasis was granted in the claims made.

Problems like the foregoing, regularly involving the question of relationship between injuries and pulmonary complaints, has prompted the following study.

Causal connection between trauma and tuberculosis has been assumed from earliest times. Instances of pulmonary tuberculosis following blows to the chest have been described in records from antiquity. Herodotus relates that Xerxes, the Persian king, died of phthisis developing after a hemoptysis as a result of a fall from his horse. Similar observations have been reported by Portal and Laennec and many others since. In our own day literature continues to present such reports from time to time, although on the whole, with advancing knowledge of the pathogenesis of pulmonary tuberculosis, such cases are being looked upon more critically. To be sure, the number of cases in which traumatic origin of phthisis is claimed to have been established is actually declining rather than increasing.

There are statistical reports regarding the incidence of tuberculosis following traumatic injury, but these refer to analyses of material and of conditions as they existed nearly a generation ago. In the meanwhile, our conception of the pathogenesis of pulmonary tuberculosis has undergone such remarkable changes, even in the last decade, that new statistical analyses will be required to estimate the incidence of traumatic tuberculosis.

Trauma and Infection in General

The relationship between trauma and tuberculosis is essentially comparable with that which exists between injury and other infections. It is now generally ac-

From New York Hospital, the Department of Medicine of the Cornell University Medical College. Presented in abstract at the Clinical Session of the American Society of Thoracic Surgeons, New York City, June 1935

cepted that the principle upon which this connection is based is expressed in the so-called law of Schultze, namely, in the presence of trauma, microbic organisms circulating in the blood stream will tend to localize at the site of injury which constitutes a point of least resistance. Recent experiments of Gmelin¹ have shown that an injured part of the body will almost always become a favorable site for metastasis in case of bacteriemia. This has also been borne out by clinical experience. Abscesses have been observed to grow at the site of a needle puncture in patients with bacteriemia. Even the minimal injury of a needle puncture suffices, in the presence of generalized infection, to serve as a point of lowered resistance. Studies of Ricker² demonstrated that in a traumatized area there is present a so-called peristatic hyperemia, implying obstruction to capillary blood flow, and congestive edema in the surrounding tissue. This peristatic hyperemia is identical with the pathological phenomenon observed in the first phase of infection. Organisms circulating in the blood stream will be readily taken up by soil thus prepared for their growth and activity. The congestion in traumatized tissue must not be confused with Bier's hyperemia, in which there is increase of blood quantity without interference with rate of blood flow through the part, so that elements for healing are conveyed to, while toxic or decomposition products are transported away from the injured area. In the peristatic congestion of Ricker, however, there is merely a static increased quantity of blood in an injured part without an adequate rate of flow.

Aside from a local action, trauma predisposes to infection through its general effect upon the body. Thus, when subjected to mechanical trauma or any sort of shock, the body suffers a decrease of vitality involving also diminution in defense powers against infection. Moreover, mechanical damage of some degree is associated with some extravasation as well as destruction of cells with accompanying physical and chemical changes, of which one manifestation is the aseptic absorption fever. The non-mechanical effect of trauma is due primarily to shock, a state profoundly affecting the neurovegetative functions of the body, which are so im-

portant in the maintenance of the immunobiologic balance.

Trauma and Tuberculous Infection

The causal connection between trauma and tuberculosis is never quite as obvious as is that between trauma and other infections. This is due to the high incidence of spontaneous tuberculosis among the general population, the frequency of latent lesions, and the characteristic delayed and chronic mode of development of tuberculosis.

In the relationship of trauma and tuberculosis, the following possibilities are to be distinguished: (1) Traumatic inoculation tuberculosis, i.e., introduction of tuberculous infection into the body by trauma. (2) Traumatic reactivation of tuberculosis, i.e., the opening of old perfectly healed lesion by trauma. (3) Traumatic exacerbation of tuberculosis, namely, unmasking a latent though active lesion by trauma. (4) Traumatic aggravation of tuberculosis, i.e., enhancement of a known active tuberculosis process by trauma.

These possibilities must be considered separately.

1 *Inoculation tuberculosis*. While commonly pyogenic bacteria are introduced into the body directly with and at the site of trauma, this is a rather uncommon occurrence with tubercle bacilli. Under exceptional conditions, trauma may introduce tubercle bacilli into the body. A considerable number of cases have been reported of tuberculous infection introduced in the course of circumcision when it was unhygienically carried out by phthysical mohels. A recent exhaustive report of Finkelstein³ is of interest in this connection, as it shows this to be of more frequent occurrence than is generally realized. Cases have also been recorded of infants infected with tuberculosis through eczematous skin lesions by phthysical attendants. A very unusual case was recently reported by Incze⁴ of a primary tuberculous infection occurring at the site of an esophageal stricture in a child who had accidentally swallowed lye and was boughed by a tuberculous attendant. Traumatic entrance of bacilli has been observed not uncommonly in lesions acquired with accidental injury by prosectors at autopsies and by veterinary sur-

geons and butchers who have inoculated themselves while cutting up tuberculous cattle. Laennec himself traced his pulmonary tuberculosis to a finger infection previously obtained in the course of an autopsy. Yet such inoculation tuberculosis is a curiosity and of little practical significance.

2. *Traumatic reactivation of tuberculosis* is of much greater practical significance. Trauma may injure a part of the body where a tuberculous lesion exists, directly reactivate it and cause it to extend locally, and possibly to other parts of the body, through the blood stream. Although the contention of Lowenstein⁵ as regards the high incidence of bacilleamia has not been substantiated, we know from the recent studies of Wilson⁶ that tuberculosis bacilleamia does occur more frequently than is generally believed.

Traumatic reactivated tuberculosis is perhaps the most frequent traumatic form met with in practice. With the prevalence of tuberculous infection in individuals living in a civilized community, the possibility of injury reactivating a healed lesion can hardly be excluded in any cases where the development of clinical tuberculosis following trauma has been demonstrated.

3. *Traumatic exacerbation of tuberculosis* is next in significance. Under certain circumstances a tuberculous lesion may exist and even extend without producing symptoms, the patient remaining unaware of the process for a long period or forever. Trauma occurring during this period may unmask such latent yet active lesions, and under such conditions, may increase the activity of the focus so as to render the patient conscious of it through the production of manifest clinical symptoms.

Here, trauma merely precipitated the clinical recognition of a tuberculous process which would perhaps have revealed itself later spontaneously. Still, but for the trauma, the smoldering lesion might eventually have come to complete healing without ever leading to clinical disease. Therefore, injury must here be considered responsible for the tuberculous process having changed from a latent to a clinically manifest disease.

4. *Traumatic aggravation of tuberculosis*. We are dealing here with a manifest tuberculous process which has become demonstrably aggravated in connection

with an intervening injury. In view of the fact that tuberculosis is a periodically relapsing disease, the possibility of a fortuitous coincidence must always be considered when an aggravation follows a trauma. It is obvious, therefore, that the connection between the trauma and the aggravation of the process which followed it, must be established with reasonable certainty.

Forms of Traumatic Tuberculosis

Traumatic tuberculosis is commonly classified into extrapulmonary tuberculosis of traumatic origin and traumatic phthisis localized to the lungs. The former is more of a surgical, the latter an internal medical problem and of greater interest to us here.

With regard to *trauma and extrapulmonary tuberculosis*, it may suffice briefly to point out that the causal relationship is very often quite clear and decisive. The literature abounds in reports of traumatic reactivation of pre-existing tuberculous foci, particularly in bones and the genitourinary tract. According to some authorities, one-fourth of the cases of bone and joint tuberculosis are attributable to trauma. Quite often such reactivation results in fatal generalization in so short a time following trauma and under such circumstances as to exclude any uncertainty with regard to the connection between the trauma and the disease.

The literature also includes a considerable number of reports of instances in which surgical tuberculosis was reactivated by operative interventions, and instances, moreover, in which surgical intervention even led to fatal tuberculous generalization. A recent report of particular interest in this regard is that of Buegeler⁷ who autopsied a woman whose death was a result of curettage of an unsuspected tuberculosis of the uterus. Another very interesting recent report of surgical traumatic tuberculosis is that of Schuller⁸ in which orthopedic intervention upon an unsuspected part led to tuberculous involvement of that part of the body.

Trauma and Pulmonary Tuberculosis (Phthisis)

The relationship between trauma and tuberculous disease is never as clear in

the lungs as it may be in the case of other organs.

The lung is the point of entry for spontaneous tuberculous infection in an overwhelming majority of instances. By recent roentgenological, as well as postmortem evidence, 90 per cent of people in civilized communities are tuberculized by the time they reach adult age. This means that they had not only a primary childhood infection, but also a subsequent reinfection. For the most part, everyone harbors in his lungs not only the primary focus but also a secondary post-primary focus of the Simon or Aschoff-Puhl type. The site of predilection of these reinfection foci is in the upper third of the lung. From pathological evidence it is apparent that even primary foci, no matter how obsolete or calcified they appear on x-ray, are nevertheless accessible to flare-up. Lung scars and calcified nodules may contain viable tubercle bacilli. Pathologic study has also shown that anyone may harbor a reinfection focus which, though inaccessible to clinical or roentgenological demonstration, may yet contain caseous infectious matter. Such a lesion, when exacerbated, may become a source of dissemination, leading to an extensive phthisical process.

The lung furthermore is the first station in the pathway of a lymphohematogenous dissemination. The tendency for tuberculous infection to persist in some part of the lymphatic system of the body is well known. When tubercle bacilli invade the blood stream from any focus in the body, they are filtered out first in the lungs. Any injured part of the lung would therefore obviously be a point of lowered resistance.

Instances of pulmonary phthisis forming at the site of injury, are reported where the circumstances were such that its development could not be otherwise explained than on the basis of the trauma itself. Such instances are exceptional, because traumatic phthisis, like other forms of pulmonary tuberculosis, usually begins and extends from a summit of the lung. In the majority of cases of traumatic phthisis, we are dealing not with the production of a new lesion at the site of injury, but with an extension from pre-existing older lesions.

Here again, trauma may light up an old

healed lesion, unmask a latent lesion, or aggravate a previously mild process in the lung.

The following general types of injuries must be considered as playing a role in the traumatic origin of phthisis: (1) Mechanical injury to the body as a whole. (2) Mechanical injury to the chest and lungs. (3) Thermal trauma (exposure to injurious weather conditions). (4) Chemical trauma (inhalation of injurious gases and fumes).

1. *Phthisis due to general body trauma.* There are well-recognized instances of tuberculosis extending to the lung after a bad fall or a blow to another part of the body harboring a tuberculous lesion. A bone tuberculosis if injured, may cause a complicating pulmonary tuberculosis. The same is true for genitourinary tuberculosis, particularly after injury to the scrotal contents. Clinical observations correlated with postmortem records provide ample illustration of this fact. Extension of tuberculosis from the genitourinary tract to the lungs has occurred in men with prostatic tuberculosis as a result of prolonged and severe bouncing while riding horse or bicycle. Under such conditions the lung would be the first organ invaded by bacilli entering the blood stream.

Tuberculosis may engraft itself upon other conditions, and in individuals debilitated by other diseases. Thus we see "phthisis of the amputated" and of the cachectic and long-confined patient. In the days before insulin, tuberculosis was much more frequent in diabetics than is the case today. Psychopathic individuals have been known to be more liable to tuberculosis, perhaps by reason of debilitating improper nutrition, unhygienic mode of living and similar depressing conditions.

2. *Phthisis due to chest trauma or a lung injury.* The late World War contributed abundantly to our knowledge of the general effects of penetrating injuries of the chest. In the light of this knowledge, it is doubtful whether tuberculous infection can be carried into the lungs by penetrating wounds of the chest. To be sure, such wounds are hardly ever followed by pulmonary tuberculosis. The incidence of post-traumatic pulmonary tuberculosis is estimated at less than two

per cent of cases of chest injuries. Graham⁹ and his associates contend that spread of pulmonary tuberculosis is responsible for the greater part of the mortality occurring in surgical treatment of pulmonary tuberculosis. However, aspiration of infectious matter is blamed for this rather than surgical trauma.

In war injuries it was the general shocking effect of severe trauma to the chest which led to tuberculosis. Shot or stab wounds were found very much less often associated with subsequent appearance of pulmonary tuberculosis than was traumatic concussion of the chest.

Superficial chest injuries, such as are produced by severe blows or the lifting of heavy burdens, may cause a tear in the lung or a *pneumothorax*, though there may be no visible evidence externally. Conversely, external signs of chest injury with or without contusion or fracture of ribs may give no clear idea of the extent of injury to the deeper thoracic structures. *Pleural effusions* of purely serous nature are mostly of tuberculous origin, and it is fair to assume that the occurrence of non-sanguinous pleural effusions, following trauma, indicates reactivation of tuberculous lesions. Trauma of milder character occurs in the everyday course of events without serious effects, yet it is conceivable that even a relatively slight injury may, in a person with quiescent or manifest tuberculosis, sufficiently upset the balance between inflammation and repair or healing. With general resistance depressed, a trauma may overturn the equilibrium of defense forces. Little knowledge is available regarding the nature of resistance to tuberculosis or its related allergy, in the production of tuberculous disease and so, it is not possible to make positive assertions regarding the mechanism involved in the traumatic causation of phthisis.

Hemoptysis is one of the most frequent symptoms resulting from trauma to the chest and presumably represents more or less severe injury to pulmonary tissue. Such lung injury may exist without obvious external effects. The importance of such a lung injury resulting in hemoptysis is often much overestimated, from the standpoint of traumatic phthisis. It is not the immediate hemoptysis from the injured lung but rather the late hemorrhage

from breaking down of the traumatic tuberculous foci that is of practical significance.

3. *The role of thermic trauma.* Exposure to cold may act as a trauma leading to development of pulmonary tuberculosis. Cases are on record where undue exposure to extremes of cold and wet have led to such development. Workers thrown accidentally into icy water, soldiers exposed to cold and wet in the trenches, have subsequently developed manifest phthisis. Chilling is a likely factor in bringing on pleural effusions, probably by reactivating pre-existing latent *sub-pleural tuberculosis*. However, this sequence of events is not accessible to demonstration and there is, of course, no instance on record where this connection could be proven from clinical experience.

There is no conclusive evidence that thermic trauma will bring on tuberculosis; nevertheless, it cannot be entirely excluded as a cause. Chilling may provoke respiratory symptoms resembling the common cold or grippe and these may often be manifestations of early tuberculosis. Lesions produced by such affections may involve lung or tracheo-bronchial lymph nodes containing tuberculous lesions which may thus be reactivated.

4. *The role of chemical trauma.* Chemical injury to pulmonary tissue or damage as a result of inhalation of various gases and fumes are really forms of local trauma. *Chemical trauma* to the lung is a well-recognized demonstrable fact. A more protracted insidious form exists in *silicosis*. Other equally serious and more acute forms of such trauma occur in connection with *irritating gas and vapor* inhalations. While the incidence of tuberculosis following war gas exposures was not very conspicuous, yet more recent evidence on inhalations of industrial fumes indicates that where such exposure is prolonged or severe and concentrated, it may serve to reactivate pre-existing healed lesions.

Medicolegal Aspects

From the medicolegal standpoint, the principle to be emphasized is that each case must be decided on its own merits. The history, clinical findings, x-ray studies, and clinical course must all be considered and evaluated as evidence

bearing upon the special aspects of the case

The guiding criteria, as established through innumerable precedents, are as follows (1) The severity and character of the trauma (2) Its nature (3) The condition of the patient before the accident (4) The age of the patient (5) The time element existing between trauma and onset of disease (6) The continuity of relationship between trauma and its recognized direct and ultimate effect upon the patient

The trauma obviously must be of such severity as to affect untowardly the entire body or injure considerably some part of it. Reliable information regarding the patient's condition preceding the trauma is needed to determine the probable effect. It is logical to assume that in a person who had been engaged in heavy manual labor up to the time of trauma, manifest tuberculosis arising in direct relationship with such injury is more likely attributable to that injury than in the case of another individual of sedentary occupation. It is more likely for a pre-existing pulmonary lesion to remain latent in a person whose occupation does not expose him to physical hardships.

Age of the patient is next in importance from a medicolegal standpoint. Tuberculosis following trauma is more likely related to injury in a young robust individual with great natural resistance, than in one past middle age whose natural resistance is more likely to spontaneously diminish with advancing age. Also, it is conceivable that in an older person accidental injury may prove the last straw in accelerating the awakening of a lesion which was already on the way to spontaneous reopening, yet under such circumstances, it is rarely possible to fix the exact role of trauma in its production.

The *time element* between trauma and onset of disease must be reasonably established. Where one has apparently enjoyed good health up to the time of the chest injury and then within a reasonable period following this, symptoms of pulmonary tuberculosis become manifest, the assumption of a direct relationship between the trauma and tuberculosis is justified. Inasmuch as tuberculosis is a slowly developing disease it is not feasible to set a *time limit*. To postulate a definite time limit in

days or weeks is in error, as it may take months for a tuberculosis to become manifest. Neither, however, is it possible to leave the time element altogether open as this would provide too broad a loophole for claims of traumatic disease following years later. Therefore, a conventional time limit must be set, and if tuberculosis is due to trauma, it seems fair to assume that diagnosis should be possible within six months after an accident. However, outspoken symptoms such as cough, expectoration and hemoptysis should manifest themselves much earlier, in fact, within a month, and there should be a continuous time link of clinical symptoms between the trauma and the first demonstrable lesion. Where it is claimed that the tuberculosis arose immediately after trauma, the relationship to the injury is very doubtful, in such cases there is rather strong evidence that pre-existing active tuberculosis was aggravated by the trauma. Traumatic hemoptysis is no evidence of traumatic phthisis. Where hemoptysis immediately follows trauma in a patient with healed tuberculosis, it does not necessarily indicate even reactivation of the old lesions, but may signify mechanical opening of a vessel from pull of adhesions or a scar. Hemoptyses may occur from trivial causes and are frequently observed in cases even with healed tuberculosis, without leading to activation or progression of the disease. Some may even be due to an old bronchiectasis or a fibrotic area. However, if the trauma was severe and followed with a reopening of a healed lesion within a "reasonable" period of time, the connection may well be substantiated, if the above mentioned manifest symptoms of tuberculous disease followed the injury in a more or less continuous relationship and linkage. It must be shown that the patient was "never well" since the occurrence of the trauma, that a quiescent lesion was transformed into chronic disability, or that recovery was considerably retarded.

Conclusions

From the foregoing, the following conclusions may be reached:

1 Under very exceptional conditions, trauma may undoubtedly introduce tuberculous infection into the body

2. As a rule trauma either reopens a healed lesion, unmasks a latent lesion, or aggravates a manifest lesion.

3. Pulmonary tuberculosis may arise following mechanical, physical or chemical lung injuries.

4. Pulmonary tuberculosis far more often follows general violent trauma applied to the body or chest, than penetrating injuries to the lung.

5. The lesions of phthisis may exceptionally be found at the site of chest injury, but far more often, they manifest

themselves like those of phthisis in general, in the upper portions of the lung. This indicates that one is dealing with an exacerbation or reactivation of pre-existing apical lesions.

6. The medicolegal evaluation of the individual case depends upon consideration of: (a) the nature and severity of the trauma; (b) the age and condition of the patient before the trauma; (c) the time element and indisputable linkage of the symptoms and first appearance of the lesions, with their traumatic origin.

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References

1. Gmelin, L.: Die Bedeutung gerungfugiger Gewebsverletzungen für die Metastasenbildung bei Bacteriæmie, *Deutsche Med. Wschr.* 59: 1788, 1933.
2. Ricker, G.: Pathologie als Naturwissenschaft, *Relations-pathologie*, J. Springer: Berlin 1924.
3. Finkelstein, L.: Über die Beschneidungstuberkulose, *Kinderaerztliche Praxis* 3:155, 1932.
4. Incze, G.: A Case of Primary Esophageal Tuberculosis, *Orvosi Hetilap* 79:404, 1935.
5. Loewenstein, E.: Die Klinische Bedeutung

der Tuberkelbazillämie, *Munchener Med. Wschr.* 77:1662, 1930.

6. Wilson, G. S.: Tuberculous Bacillæmia, *British Med. Research Council, Special Report*, Series No. 182, London 1933.

7. Buengeler, W.: Akute Miliartuberculose nach ausschabung bei Endometritis, *Frankfurter Ztschr. f. Pathologie* 47:315, 1934.

8. Schuller, I.: Zur Frage der Traumatischen Tuberkulose, *Munch. Med. Wschr.* 82:834, 1935.

9. Graham, E. A., Singer, J. J., Ballou, H. C.: *Surgical Diseases of the Chest*, Phil., Lea & Febiger, 1935.

DR. CHARLES NORRIS, "SUPERSLEUTH"

That is the term applied by the New York *Sun* to Dr. Norris, who died on September 11, and who was for seventeen years Chief Medical Examiner of New York City, and gained international fame for his well-nigh uncanny solutions of mysterious deaths. "In his investigations of sensational murder cases he became to the police almost a supersleuth and to the public almost a legendary figure in the life of the metropolis," says the *Sun*. The *Herald-Tribune* recalls that through one of the most violent eras in the long story of this city, it was the job of Dr. Charles Norris to ring down the curtain on thousands of tragedies, high and low, which ended in death. Homicide and suicide cases, drownings and fatal automobile accidents, all these passed in procession under the keen eyes of this skeptic, who was one of America's leading pathologists, a sound student of human nature and a real character among New York's undistinguished millions. He liked his job and did it well, finding truth at the bottom of some of the city's most celebrated mysteries.

He was immune to influence, the pull of politics, the prestige of high places. He was a man of learning, impeccable integrity, Rabelaisian humor and wide understanding. He called a spade a spade, whoever placed

it on the table. If a man committed suicide and his family wanted it listed as a natural death, Dr. Norris put it down as a suicide—in black and white for all the world to see. He was equally quick to scotch schemes to turn suicides into "murders" to assure double indemnity from insurance companies. Sometimes—as in the celebrated Elwell case—he had to fight hard to convince the other investigating authorities that what they were willing to accept as a suicide had really been a murder.

Again there were times when he wiped out the disgrace of what had seemed a homicide or suicide by detecting that a person had really died of pneumonia. His morgue, to which were brought the victims of stabbings, persons who had inhaled cooking gas, or hanged themselves, or jumped from windows, he called "the Country Club." There, too, were brought those who had drowned, those who fell in gang battles, men and women and children who perished in fires, and all those whose deaths occurred under suspicious circumstances. It required the canny endowments of a highly competent detective, a working knowledge of ballistics, and many other talents, along with the observation and skill of a pathologist, to get at the cause of some of the tragedies.

COMMUNITY HEALTH EDUCATION

G D FORBES, M D , *Kendall*

The subject of community health education covers so vast a field and has so many angles of approach with such a variety of technic that it is absurd to attempt to cover it in any short paper. However, it is fitting to ask anyone to tell something of what he has been able to find out about it in a short paper. In evidence of this I once asked Bishop Hanna, who is now Catholic bishop of the San Francisco diocese, how long a preacher should preach. His reply was "My son, I have known many brilliant men and I have never known a one who could not tell everything he knew in twenty minutes." It is evident that this paper should take something less than twenty minutes.

During the past years we have accumulated a vast amount of information about public health. As technicians in public health we need to learn much more. Unfortunately the non-technical public is bombarded with syndicated articles in the press that contain an amount of information that would have done credit to a course in medicine not so many years ago. Certainly it is not necessary, and it seems hardly desirable, that the man on the street be an expert in matters of health. However, it is quite necessary that he have a working knowledge of certain fundamental principles that he needs to apply in his daily activities of living with himself and in contact with his neighbors. When you come to think about it there are only a few things that he needs to know about any one subject but there are a lot of subjects about which he needs to know those few things. Besides having a working knowledge of the fundamentals it is every bit as important that he be able to recognize the fallacies of that brand of pure hokum that is shouted at him from every loudspeaker in the land. Of these needful fundamentals about health and disease consider only a few and at once we begin to realize the problem facing us. Everyone should know

how diphtheria can be prevented, what to do in case of a bite by a strange dog, the infectiousness of tuberculosis, why everyone should be vaccinated, how diseases like whooping cough and measles are transmitted. Every parent needs to know why the almost inevitable attack of whooping cough and measles should be postponed beyond the high fatality ages of these diseases. Every prospective parent needs to know why the pregnant woman should have a blood Wassermann. Every country dweller needs to know how to arrange a safe water supply and how to dispose of sewage. People in general need to know of the growing menace of syphilis and that it can be controlled. These are only a few examples but from them it is very plain that the man on the street needs to know something about a great many things. It follows that unless the instruction given him is limited to fundamentals he is going to have too much to remember. If he tries to remember too much he will become confused and his blunders may easily be tragic, or he may react by becoming disgusted and forgetting the whole thing. Neither of these results are useful to him. Neither is what we want. The answer is to stick to first principles and leave the details to the experts. It is no benefit to a dairy farmer to know the bone changes that occur in von Bergman's syndrome. It is quite necessary that he know that the germs of lockjaw are commonly found in the stables where he works. Health instructions for the layman need to be simple and it needs to apply to his living and working conditions if we are to get his attention. How to get this information to him is a tough problem and we have to resort to several methods to reach him.

Of all the various means of educating people in health the personal teaching of the physician is still the most important, especially in country communities. How important it is to continue to be will depend upon the efforts of the profession.

*Read at the Annual Meeting of the Medical Society of the State of New York,
Albany, May 14, 1935*

to make it important. There has been much criticism of the old country doctor type. He was too garrulous. He told everything he knew to every patient he saw. There is some truth in this. There is also something to be said against the new type of impersonal, ultrascientific practitioner, who thinks only of cases and seldom of people. He does not waste much time teaching people how to keep well. It may be that in the future this will be the right attitude. When health activities are better organized teaching may be better done by those trained to teach. But at present the practice of medicine is something more than the exchange of a prescription for a fee. The glory of medicine is in the services it has rendered humanity for which it has not been paid. Its almanac of nobility lists those who loved humanity more than they loved themselves. A Grenfell in Labrador. A Noguchi in Africa. Whether you are one who glories in the efficiency of our great medical centers or one who, with all the humility of an Ambroise Paré, is content to say: "I dressed his wounds; God healed him," I submit this proposition to you. When we have brought the patient through his illness and have set his feet on the road to health we have done but half our duty. It is our further duty to sit down by his bed and explain to him how his illness came about and to tell him, if it is possible to do so, how he may so order his life that it will never happen again. When physical disaster threatens and when sickness comes the teaching of the physician is treasured. It is our chance to teach and at the same time to pay the moral debt we owe our patients.

In all our present health educational work there is one great weakness. All our teaching, all our publicity reaches the man who needs it least and fails to reach the man who needs it most. How to bring health education to the back-road farmer who doesn't own a radio, doesn't read a newspaper, and has not read a book for no one knows how many years is a matter about which I am not offering too much advice. Rather, I am asking for it. In addition to the efforts of the local doctor it seems to me that there are two factors operating to solve this problem. The first is the school. When you educate

a child you, in a measure, educate his parents. If there is practical health education in the schools we can reasonably expect that the present generation of school children will grow up having better health habits than our generation has. We may also expect that a certain amount of this information will filter through to other members of that pupil's family. Just how much effect this is going to have on the health habits of the adults is not easy to estimate but at least they will be modified for the better. As a result of this teaching we can hope that those things that we induce the present generation to do with difficulty the coming generation will do as a matter of habit.

The second factor in reaching the back-road farmer is the public health nurse. However, the nurse needs to keep this in mind. These inarticulate farmers are not stupid. They have all the native intelligence of the race but they are embarrassed. They are skeptical of new ideas. The very isolation that protects them from the epidemic diseases that attack the dweller in more thickly populated districts acts as a barrier to the ready acceptance of new ideas. May I suggest this to the nurse. If she will take time to explain to the farmer in his own language *why* he should do, or not do, a certain thing she will find him the most cooperative person in the world. Try to highhat him or dictate to him and he will balk. For one I shall be glad when the work of these nurses has removed from the minds of country people the mystery that still surrounds illness and the idea of magic that they associate with healing.

It is our duty as physicians and health workers to instruct the public in health matters and to keep them informed about health conditions in our communities. Here the local newspaper becomes useful. I feel that the local health item carries much more weight than the syndicated article. It is a personal message of a local physician to local people many of whom are his patients. For this reason these articles do a lot of good. But if we are to catch the attention of the public and hold it they must be timely. An article on frost bite during the dog days of August is distinctly poor publicity technic. The subject for an item is often suggested by

some local condition. The threat of a scarlet fever epidemic may be causing some apprehension. Here is the chance to give people the news of the epidemic and at the same time tell them what they need to know about scarlet and how to avoid it. At the moment an article on scarlet is news. Because it is news the local papers welcome it. Because it is news it will be read.

In community organizations, such as Parent Teachers, we not only teach health but we train missionaries who will teach to others what we have taught them. Here is the big chance to mold public opinion—resentment against those who ignore quarantine and spread epidemics, who send children with whooping cough to school, who cough and sneeze their flu germs in churches and theatres. These groups are usually from the more intelligent of the community. It is here that the abstract discussion of health problems comes into its own. Here you can talk freely of your aspirations in community health. They will be interested in the gains resulting from free milk in schools. They will understand why immunization to diphtheria can never stop. You can quote figures and show a graph or two. To them you can talk about syphilis and even the National Broadcasting Company cannot stop you. With these groups the admonition to teach simply does not hold to the same degree that it does in the schools and in the press but it is just as well to remember that we are talking about things that are for the most part strange to them. Even in these groups our teaching often has to be as "little steps for little feet."

The movie in the country high school is another means of reaching the hard to reach farmer. In my town we have had films and we have had talks on syphilis. The idea was to prepare the way for the drive against that disease. I feel that the results were good. These meetings broke the ice. If you want to find the place where ultraconservatism still exists, where the ancient taboos are still in full force go to the small town. In my country syphilis and gonorrhea are still spoken as the "bad disease" and at low breath showing that we countrymen think of them in terms of morality and not as communicable diseases. But your farmer,

ultraconservative as he is, who learns how these diseases are increasing and how terrible are their effects and how other countries are checking them immediately wants to know why we cannot do the same. There is a field for health education through the movies not yet touched.

In spite of all our experience at health education we are venturing into a new field. In health publicity we are blundering about presenting statistics, issuing warnings, and predicting dire disaster to any who do not do as we tell them. The results have not been all we could hope for. The trouble is that we do not know the proper psychological approach. We have not developed a technique. We have not been very ingenious. In the past most of our slogans—and I think that slogans are dangerous things—have had little popular appeal. The one outstanding exception to this is the slogan devised by Dr. Biggs years ago "Public health is purchasable." Within natural limits every community can determine its own death rate. What an advertising man he would have made! In the hope of better results from our efforts I may suggest that we begin by being honest with ourselves and disabuse our minds of the idea that we reduce the morbidity or mortality rate by so much. We did nothing of the kind. The fact of the matter is that all the results we have obtained have been in direct proportion to the response we have obtained from the layman. We can only point the way. Unless he follows the results are nothing. I urge that in our teaching we use the language of the common man. It is not the language of scientific medicine but it is colorful and he understands it. We need to be positive in our statements. It may be objected that this is not always possible. Only occasionally is this true. We need to remember that the layman has a very great contempt for the qualified statement of the scientist. With country people we must never forget to give the reason why. People will cooperate in things they understand but dictation arouses opposition. "E's ist verboten" is not in the American vocabulary.

I feel that the greatest single defect in our health educational work is in that we expend so much effort to educate adults. Some of them can be educated, some do

not care whether they are educated or not and some refuse to be educated. All this time there are millions of children who can be so trained that they will live longer and happier lives. I would like to see children, from the time they enter school until they finish, given continuous health instruction. They can be made to develop health habits that would remain fixed for the remainder of their lives. And if they develop a contagious disease I would like to see them considerate of

others, show a spirit of good sportsmanship, and confine the infection to themselves. They need to be trained in the ethics of illness.

I want to make it plain that this is nothing but a few random remarks by a country doctor. The opinions expressed are entirely my own. Back of them there is no authority other than my own experience. Public health problems as you see them may be very different. This is offered for what it may be worth to you.

GRADUATE FORTNIGHT OF NEW YORK ACADEMY OF MEDICINE

Plans have been completed for the New York Academy of Medicine's Eighth Annual Graduate Fortnight. The subject for this year is to be "Diseases of the Respiratory Tract." The program is scheduled for October 21 to November 2.

Registration for attendance will be closed when the number reaches 700. Last year many who had planned to attend were disappointed at the last moment through failure to register. A fee of \$3.00 admits the holder to all the features of the Fortnight. Application for registration should be made to Dr. Frederick P. Reynolds, Medical Secretary, New York Academy of Medicine, 2 East 103 Street, New York City.

Eighteen important hospitals of New York City will present coordinated afternoon clinics and clinical demonstrations in connection with the program. Recognized authorities in special lines of work are to discuss various aspects of the general subject at evening meetings. A special effort has been made on an exhibit which will present a comprehensive picture of anatomical, bacteriological and pathological specimens and research material.

Among the features to be presented at the meetings, in the clinics and in the exhibit, will be:

The problem of asphyxia. Apparatus for resuscitation. Poisonous gases. Gas masks. Allergy in its relationship to diseases of the respiratory tract. The common cold. Influenza. Lobar, lobular and bronchopneumonia. Chronic pneumonia. Diseases of the mediastinum. Bronchiectasis. Pneumokoniosis. Emphysema. Sinus disease from infancy to old age. Diseases of the larynx, trachea and main bronchi. Whooping cough. Atelectasis and massive collapse with their concomitants, cyanosis and dyspnoea. Foreign bodies and tumors. Mycotic infec-

tions. Pleurisy. Asthma. Thrombosis and embolism. Abscess and gangrene. Pulmonary tuberculosis. Medical and surgical approach to empyema. Surgery of the chest. Postoperative pulmonary complications. Clinical and laboratory diagnostic methods. Drugs, sera, vaccines and other forms of therapy.

Speakers at the evening meetings will include Drs. J. Burns Amberson, George Blumer, Henry Chickering, Lloyd F. Craver, Alphonse R. Dochez, Leroy U. Gardner, Yandell Henderson, Charles J. Imperatori, Chevalier L. Jackson, Adrian Lambert, Howard Lillenthal, Harrison S. Martland, Jonathan C. Meakins, James Alex. Miller, Charles T. Porter, Maximilian A. Ramirez, Arnold R. Rich, David Riesman, Charles Hendee Smith and Henry Wessler.

The Graduate Fortnight originated in 1928, as a result of the activities of the Committee on Medical Education of the New York Academy of Medicine. One specific subject is selected each year and treated from its various aspects. Subjects of previous fortnights are: 1928, "The Problem of Aging and Old Age;" 1929, "Functional and Nervous Problems In Medicine and Surgery;" 1930, "Medical and Surgical Aspects of Acute Bacterial Infections;" 1931, "Disorders of the Circulation;" 1932, "Tumors;" 1933, "Metabolic Disorders;" 1934, "Diseases of the Gastro-Intestinal Tract."

An examination of the list of registrants for past fortnights shows visitors from every section of the country. It is interesting to note from these records that in a number of years other states have provided a greater attendance than New York State. For example, last year more physicians attended the Fortnight from Pennsylvania than from New York State.

VITAMINS AND THE CHILD

CHARLES G KERLEY, M D, *New York City*

Previous to the beginning of the present century, but a limited knowledge had been acquired concerning the chemistry and the utilization of food by man and animals. It was known that animal life required fat, protein, carbohydrate and mineral salts, fat and carbohydrates to produce heat and energy, protein for growth and developmental purposes, and mineral salts for bone formation and maintenance of nerve balance. These substances are taken in different forms depending upon the type of animal to be nourished. The herbivorous cow exists on a diet grossly much different from the carnivorous cat family, yet the basic nutritional factors necessary are the same for both types. The nature of the foods of different species vary, and the digestive apparatus of each specie is built to care for its peculiar type of nourishment and thus comprised our knowledge of the inter-relation of chemistry and body growth. That this covered and completed all that relates to nutrition has never been accepted by the biochemist and research worker. Since the time of Hippocrates (B C 460-370) there has existed in the minds of many investigators the opinion that there were unknown substances in foods that have an important influence in determining their utility. Hippocrates named the substance "Aliment."

During the next 2000 years but little was learned concerning the science of nutrition. A study of food and food values, and the effects upon the organism was first undertaken in a scientific fashion in the late seventeen and early eighteen hundreds. During the past twenty-five years, vast advancement has been made as to the relation between growth development, bodily disorders and the food consumed. It was found that chemically pure mixtures of the well known nutritional elements mentioned above failed to ward off disease and supply adequate body nourishment. It was concluded that food prepared by nature contained the necessary substance and must consequently carry other essential food factors

that possess the powers of activation, something that gave the necessary push to the food or the body cells to make the food utilizable by the physical organism. Late in the 1890's Kijlman, a Dutch investigator produced polyneuritis in pigeons by feeding polished rice and later cured them by feeding the husks of the rice removed in the polishing process. This observation stimulated research along nutritional lines in many countries. It was soon found by different investigators that something was needed and was present in food other than the well-known nutritional elements. These substances were described as accessory food factors. Funk in 1910 established that extracts made from rice polishings would cure polyneuritis in pigeons and coined the name "Vitamin" for this product. Later observations have shown the existence of five different vitamins* in nature and while the exact compositions of these substances have not been established, observations on humans and experiments on animals have made possible a differentiation among vitamins. Not only polyneuritis but scurvy, rickets, and an eye disease known as xerophthalmia, in addition to other ailments and tendencies are produced by deficient vitamins in the diet which vary in function sufficiently to enable us to make a broad classification. They are recognized as Vitamins A, B, C, D, and E.

Vitamin A—(fat soluble) Present in the fats of milk, egg yolk, cod liver oil and liver. It also exists in the husks of certain seeds and in the leafy vegetables. Scarcity or absence of this vitamin has a pronounced effect upon growth and development. Animals deprived of it experimentally show stunted growth, retarded development and the eye disease known as xerophthalmia already referred to.

Vitamin B—water soluble (vitamin B complex) Turnips, carrots and potatoes are particularly rich in this vitamin. It

* For technical chemical reasons the spelling was later changed to omit the terminal "e" and the present best form has become 'Vitamin'.

exists also in the leafy vegetables, in yeast, and in the seeds of plants. In addition to the production of the disease known as beriberi or polyneuritis a deficiency of vitamin B causes malnutrition, loss of appetite, a lack of bodily resistance and an absence of capacity for work. A child on a diet deficient in vitamin B will be looked upon as indifferent and lazy in an occupational sense. Further, children to whom this vitamin is furnished in inadequate amounts are predisposed to infection such as tuberculosis and the so-called common colds, which condition is nothing more or less than a bacterial infection of the mucous membrane of the respiratory tract. While many of such children have been freed from tonsils and adenoids, and the absence of sinus disease has been proven by competent observers, the colds still continue. An inquiry into the dietetic habits of such patients shows that because of the child's food dislikes or family indifference the food consumed is short in vitamin B, consisting of soup, meat, white bread and cereals ready to serve—usually the child hates the whole grain cereals and green vegetables. Further, I find that in the frequent cold cases, sugar is usually given in generous amounts. The use of a high sugar diet and a scarcity of vitamin B foods explain many cases of frequent colds for which the parents seek the aid of a physician.

Vitamin C: This is known as the anti-scorbutic vitamin, and is found in the citrus fruits, tomatoes, milk, and in other foods in lesser amounts. The disease scurvy has been recognized for hundred of years. In time of famine and war it has been responsible for the loss of thousands of lives. Until a few years ago it was frequently encountered in infants and young children. The potency of vitamin C is destroyed by heat. Bottle fed children who are given sterilized milk and the boxed baby foods supply the cases. A joint will become sore and painful, the gums show a blue margin adjoining the teeth and later bleed upon manipulation. Perhaps blood will appear in the urine. If the disease is not early recognized the joints will become excruciatingly painful and swollen, hemorrhages take place in the joint structure, sub-periostitically in the long bones. Infants fed on cooked or pasteurized milk, or the pro-

prietary milk foods should be given orange juice or tomato juice, both of which are at all times available.

Vitamin D: Exists in animal fats, such as cod liver oil and butter fats, and its absence or mal-assimilation is one of the principal factors causing rickets.

Vitamin E: Observations on this factor are not as well established as in the case of those discussed. Competent observers believe that it has a function in fertility and reproduction. It is found in the wheat germ, yellow corn and, leafy vegetables.

Such briefly for the vitamins known and accepted. What is the practical application of the findings of many able research workers in nutrition covering the past twenty years? Simply this—in selecting foods for the young, keep as close to nature as possible, use cows milk, butter and cream, cereals such as supplied by the whole seed crushed or ground, oats, yellow corn and wheat; vegetables as they come from the earth. Establish the habit of fruit and fruit juice consumption, give meats, poultry, fish and eggs in moderation. The results of narrow dietetic practices whether by habit or intent, devitalize the body, prevent normal growth and produce physical inferiority. Further and most important, resistance is broken down against those diseases in which a specific immunity is not supplied by the body cells.

Comment

All the essential vitamins are abundantly supplied by nature. Normal dietetic habits in children with a range of food as above outlined will obviate to a large degree the necessity of the artificial vitamins. The child who cannot take milk or milk products, or with whom fruits do not agree, who hates cereals or vegetables, and whose likes and dislikes determine his nutrition are to be numbered among those in whom the vitamins of the laboratory are necessary.

132 WEST 81ST STREET

RIGHT TO THE END

A violent dispute in an operating room over a point of surgical technic led to a duel with cavalry sabers between two surgeons in Budapest, Dr. Laszlo Farkas and

Dr. Josef Krauss of St. John's Hospital, according to a news dispatch. Dr. Krauss was critically injured. The dispatch omits to say what happened to the patient.

BACILLARY DYSENTERY

Acute Fulminating Type with Marked Toxic Neutropenia

JOSEPH FELSEN, M D, *New York City*

In another article¹ five atypical forms of acute bacillary dysentery were described, namely the appendicular, neurotropic, afebrile, asymptomatic and constipated. During the past six months three instances of another type has been encountered which, because of the uniform and distinctive clinical picture, is deemed worthy of note.

All three patients were women aged 26, 34 and 35 years, respectively, and came under observation shortly before death. The previous history covered a period of approximately four weeks during which time there had been present a severe diarrhea with blood and mucus accompanied by tenesmus, abdominal pain, and marked prostration. The pyrexia varied about 102° F to 103° F. Physical examination at the time of observation as specified above revealed in each instance an acutely ill patient suffering from what appeared to be an overwhelming toxemia. The features portrayed anxiety with pinched faces, flushed and somewhat hollowed cheeks and temples and labial herpes. The pulse was rapid, skin dry and there was evidence of generalized dehydration. The mentality was quite keen. Anorexia was marked. The chief symptomatology was directed to the abdomen which was greatly distended and diffusely tender. No rigidity was noted. Proctoscopy revealed an acutely inflamed ulcerated mucosa, bleeding freely to the slightest trauma and exuding a mucopurulent fluid. The ulcers were shallow, irregular in shape, discrete or confluent, occasionally serpiginous, but were not undermined or surrounded by a hemorrhagic halo. The intervening mucosa was diffusely inflamed and the site of patchy membranous deposits. There was an almost continuous flow of fluid fecal material mixed with mucus and blood. Here and there the intact mucosa showed definite evidence of an acute inflammatory polyposis (polyposis cystica of Virchow). Cultural, agglutination and phage studies instituted at this time revealed the

infections to be due to *B. dysenteriae* Sonne-Duval, Flexner and Mt Desert, respectively. No trophozoites or cysts of the *Endamoeba histolytica* were found. The blood picture in each instance was that of a severe progressive leucopenia, the count falling to 1200 leucocytes per cu mm or below. The neutrophils totaled less than ten per cent, the remaining cells being lymphocytes. Varying degrees of toxic change were noted in nearly all of the polymorphonuclears such as swelling of the cell bodies, coarse irregular cytoplasmic granulation with vacuolization and focal pyknotic areas in the nucleus with partial or complete disintegration. In one case the leucocyte count rose just prior to death to 6400 with a corresponding increase in the neutrophils. This may have been due to intensive antidyenteric serum and vaccine therapy instituted shortly before the rise occurred. The relative and absolute granulocytopenia is of particular interest because leucopenia is quite characteristic in the early stage of many cases of acute bacillary dysentery which we have encountered, often falling as low as 4000. The differential count, however, is normal or near normal with little evidence of toxic change in the neutrophils. With convalescence, a gradual rise to normal or a moderate leucocytosis occurs. The blood picture described above may be due to the destruction of granulocytes in the peripheral blood stream or to the necrotizing action of dysentery toxin on the vascular sinusoids of the bone marrow. The granulocytes cannot migrate from the extravascular zone in the bone marrow where they are formed into the blood stream. Sections of the bone marrow in one case showed no deficiency of granulocyte production. We have repeatedly noted vascular necrosis in necropsy specimens of the intestine and spleen in acute bacillary dysentery.

The clinical course of the three cases referred to was rapidly downhill, perforation and peritonitis occurring in each

instance twelve to twenty-four hours before death. An antemortem pyrexia of 106° F. or above was also noted. Post-mortem examinations made in two of the three cases reported showed an extensive ulcerative enterocolitis with polyposis involving the distal portion of the ileum and the entire colon. The course of the acute infection in each case was approximately one month.

Certain clinical inferences may be drawn from this unusual type of dysentery. The presence of herpes which we previously noted in the neurotropic form of dysentery suggests a combined form of two toxins,—the enteric and neurotropic, a virus probably being associated with the latter. From our preliminary clinical and experimental work in other cases it also appears that there are at least two other fractions or individual toxins which have an affinity for the bone marrow (myelotoxic) and joints (arthritic). All of these toxin factors must be taken into consideration in selecting the toxin producing strains for immunizing horses. The inefficacy of therapeutic antidysenteric serum used early in some cases is undoubtedly due to the neglect of this important point. For therapy to be effective the disease must be recognized in the early stage and high titer polyvalent dysentery antitoxin given at once. It is of value chiefly within the first few days of the disease when the ulcerative lesions are being produced during the process of excretion of the toxin from the blood stream through the wall of the bowel into the lumen. Once the damage has been done, and the major portion of it appears to occur within 24 to 72 hours,

serum or antitoxin can only arrest further action of the toxin. Secondary non-specific intramural infection may occur through the ulcerations produced by *B. dysenteriae* and the field is set for chronic dysentery in the forms more widely known as chronic non-specific ulcerative colitis, chronic distal ileitis or non-specific granuloma.² Repeated fecal cultures must be made during the first few days. Agglutination titer and diagnostic bacteriophage are usually of value during, or after, the third week. A severe diarrhea, possibly traceable to a very recent (12 to 48 hour) contact infection, moderate fever, tender, spastic ileum and sigmoid and a normal or subnormal leucocyte count are sufficient indications for instituting specific therapy without waiting for the results of fecal culture. This is particularly true of infants and children.

Summary

A form of acute bacillary dysentery has been described, characterized by a rapid course, progressive leucopenia with granulocytopenia, and fatal termination in approximately one month. The importance of early diagnosis and immediate specific therapy with high titer dysentery antitoxin is stressed.

667 MADISON AVENUE

References

1. Felsen, J., Rundlett, E. V., Sullivan, J., and Gorenberg, H.: Atypical Flexner Dysentery. A Preliminary Report of the Jersey City Epidemic, *J.A.M.A.* 103: 1055, 1934.
2. Felsen, Joseph: Nonspecific Ulcerative Colitis, Terminal (Distal) Ileitis, and Bacillary Dysentery. Their Common Pathogenesis, *NEW YORK STATE JOURNAL OF MEDICINE*, 35: 576, 1935.

CAMPAIGN AGAINST DIABETIC DEATHS

Many unnecessary deaths from diabetes are occurring every year, due to ignorant self-medication, says Health Commissioner John L. Rice, and he is sending a letter to all New York City physicians asking data on their diabetic patients. It is said there are 100,000 diabetics in the city. Information sent to the doctors also states that—

"Approximately twice as many women have diabetes as men.

"Diabetes appears more frequently in persons over forty-five years of age.

"The disease is more prevalent among Jews than among non-Jews.

"It is two or three times more prevalent among married women than among unmarried women of the same age.

"Since the introduction of insulin in the treatment of diabetes there has been a distinct prolongation of life of diabetic individuals.

"Contrary to statements often made, diabetes was always a very prevalent disease, only it was not so frequently correctly recognized in years gone by.

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EDITORIALS

Social Suicide

Speaking at the Annual Convocation of Colgate University, President Cutten issued a warning on current social trends that should receive the serious consideration of leaders in government and sociology. Many of the checks imposed by nature on the unfit have been removed by modern civilization without the imposition of compensatory controls. The result is a biological anarchy which must be stopped, according to Dr. Cutten, "for a civilization which removes natural checks more rapidly than it fosters higher controls commits suicide."

Social legislation draws special fire from Dr. Cutten because it encourages "the fit to join the ranks of the unfit." This does not mean that welfare measures should be abandoned but that they should be so devised as to aid the unfit without increasing their number or corrupting the fit.

Compulsory health insurance is an outstanding example of the legislation condemned by President Cutten. It reduces to a state of partial dependence many who have always provided for their primary needs and encourages malingering by placing a premium on illness. Regular deductions from the small wage earner's salary make it almost impossible for him to save, thereby fixing him permanently

in the under privileged class. At the same time the economic status of the physician is lowered and his professional independence impaired.

The end result of this reform, then, is a working class which has lost its self reliance and its chance to rise, a medical profession deprived of the incentives for research and self improvement, an inferior brand of medical care and a staggering burden of taxation to maintain a superfluous bureaucracy. Dr. Cutten does not exaggerate when he calls such a condition social suicide.

Counter Curbs

The State Department of Health should re-examine its powers to see whether it has not the right to curb the unsupervised sale of many drugs now in common use. It is impossible to estimate exactly the damage to the public health from excessive use of preparations now purchased over the counter, but there is no doubt that some untimely deaths—to cite just one example—result from the misuse of aspirin and coal tar derivatives.

The mischief does not rise solely from dangerous properties in the drugs. While reducing preparations with dinitrophenol and depilatories containing thallium acetate should be barred *per se*, there are other products which are safe and useful

in the hands of a physician but not to be entrusted to laymen. This group includes glandular extracts of all types, atophan, veronal and a host of other pharmaceuticals.

Apart from these considerations, there is the delay in seeking necessary treatment which results from self-medication,—a delay which usually prolongs the period of illness, extends the pathology and may cause chronicity or even death. The numerous pain-killers on the market frequently veil the early stages of a dangerous lesion which, once advanced, is incurable.

The physician is not wholly free from blame in this situation. By ordering proprietaries instead of writing prescriptions he has made certain preparations familiar and seemingly safe to the public. A more important factor is the widespread advertising of commercial drug houses.

The practitioner can help a little by reviving the art of prescription writing. Until adequate legislative curbs are placed on the advertising of drugs and cosmetics, however—and that day seems regrettably remote—there seems little hope of persuading a large section of the public to visit the doctor before the druggist. The Department of Health can minimize the dangers of self-medication by forbidding the sale of potentially harmful drugs except on prescription.

Economic Problems of Medicine

There has appeared a short, concise, easily-read volume on economic problems of medicine from the pen of Dr. A. C. Christie which is so well balanced and comprehensible a book that we recommend it to our members. It carries lessons for hospital workers and social workers. Those who have adopted compulsory health insurance as their own will learn much from it, and the organized profession will find comfort and inspiration for the standpoint it has held by the data presented by this student. We particularly recommend it to our legislators who will soon be confronted by the confusing

claims of proponents of so-called social medical reforms because it is not only entertaining but highly instructive and authoritative.

Another Survey

The Federal Government, through the agency of the Public Health Service, is about to undertake a survey of sickness in this country. To what purpose the accumulated data will be put has aroused a sensitive profession so that it is on its guard. Who asked for this survey? What useful purpose is to be accomplished by the large expense involved? The taxpayer, of course, must again meet the burden.

We know from bitter experience how surveys eventuate into propaganda. Who needs this propaganda? Or are we to consider this as another government project, paid for by taxes, to be developed as it goes along and eventually to be used in an effort to regiment the profession and socialize medicine? How medicine longs for a real long breathing spell!!

Meningococcic Meningitis

For more than a quarter of a century, anti-meningococcus serum has been accepted generally as the proper therapeutic agent for epidemic cerebrospinal meningitis. The method of employment, however, varies widely in the hands of different practitioners. Some favor the use of massive doses intraspinally; others, frequent administration, sometimes as often as three times daily in combination with intramuscular and intravenous injections of the serum. This wide difference in the employment of the serum is probably due to the general misconception that the serum destroys the organisms in the spinal fluid. From all knowledge at hand, it appears that the serum is definitely not bactericidal, and at the present time little is known concerning the exact manner in which the serum acts to cure the lesion.

Because of these factors, in addition to the wide variance in the clinical mani-

festations presented by the disease in different epidemics and in different individuals, Neal¹ states that no one standard means of therapy is to be advocated. The serum should be injected intraspinally in all cases, but intravenously only when a positive culture of micro organisms is obtained from the blood stream. Only where the intraspinal pressure is very high should a lumbar puncture be performed more than once in twenty-four hours, since, in the removal of the spinal fluid, leucocytes are withdrawn which still possess their utmost of phagocytic power.

From experience gained in the study of epidemic meningitis over a period of twenty-five years, Neal feels that the best results in the treatment of meningococcus meningitis are obtained by the proper application of serum therapy to the clinical type of case presented. The usual cases of the disease should not be treated in the same manner as the septicemic or fulminating ones and moderation in the use of serum is more often than not followed by the most favorable result.

The Common Cold

The common cold is the one disease concerning which the lay public and the manufacturers of patent medicine profess to know more about than the medical profession does. One has but to sniffle or sneeze and he is immediately showered with the solicitous advice of his friends as to the multitude of sure cures available. In addition, he has before him constantly the "educational" program of the makers of remedies for coryza. Is it any wonder, then, that the farmer, having tried all the means suggested to him, was finally led to state that "the best thing for a cold is a handkerchief?"

But of far more importance is the prevention of the common cold, which, in many instances, assumes epidemic proportions and is attended with many severe complications. The failure hitherto ade-

quately to cope with the rapid spread of the infection through a community has been largely due to our almost complete lack of knowledge concerning the exact etiological factor. It is extremely doubtful but as yet undetermined whether or not the pathogenic organisms which ordinarily inhabit the upper respiratory tract are the causative agents. It is, however, an established fact that they do play a role in the development of the various complications.

Recent work on this subject seems to indicate that the causal agent of the common cold is not present previously in the nasal passages of those who are attacked. Sterile filtrates made of the secretions of individuals who are in the first stage of a cold will reproduce a cold when instilled into the nares of humans who have been free from and quarantined against the disease. This filter-passing agent is capable of surviving for a long period outside the body and will proliferate *in vitro* upon suitable culture media.

Browning,¹ in a survey of the more recent investigations anent the common cold, feels that the evidence brought forth points strongly toward the introduction of a filter-passing agent into a previously healthy person as the manner in which that person contracts a cold. The outbreak of an epidemic of colds in a community after the visit to it of a stranger who has a coryza furnishes additional support for this contention.

CURRENT COMMENT

THE BULLETIN OF THE Bronx Medical Society, issued in September, says that a dramatized radio program will be offered over the Blue network of the National Broadcasting Company, beginning October 1st at 5 P. M., Eastern Standard Time, and continuing on every Tuesday thereafter. This program is sponsored by the American Medical Association and we feel that this first national radio attempt to publicize

¹ Neal Josephine, B. Meningococcic Meningitis in Children, *J. A. M. A.*, Vol. 105, No. 8 P. 568, August 24, 1935.

¹ Browning, C. H. The Common Cold, Survey of Recent Work, *Glasgow Med. Jour.*, Vol. 5 P. 329 June 1935.

organized medicine should be brought to the attention of patients as well as the profession.

THE SEPTEMBER BULLETIN OF THE Monroe County Medical Society, speaking of the new compensation situation says, "Since the beginnings of medical history, it has been a melancholy but indubitable fact that medical authority has had to struggle constantly with those who opposed its right and competency to take care of the sick. * * * For nearly a generation of time an outstanding social endeavor of our state, with reference to the injured of industry, has functioned with a definite degree of success but with certain imperfections that have been attributed to lack of adequate medical representation. The new law awards to the profession a wholesome opportunity and a heavy responsibility. The opportunity consists in being granted a set-up which recognizes the equal rights of every licensed physician to take care of certain injured individuals. * * * The responsibility resides in the fact that the profession should familiarize itself with the problem, should function wisely and should not abuse its increased power."

FROM THE WESTCHESTER MEDICAL BULLETIN of September we cull, under the title, "Too Proud to Fight?," the report of a survey regarding the social prestige of the medical profession made by Professor Hartmann of the Pennsylvania State College. It says, "It should be a source of satisfaction to the public, almost as much as to the profession itself, that medicine is still by far the most highly respected of professions and occupations. * * * Fortunately, the tendency toward the corporate practice of medicine which was very strong a few years ago now has been quite effectively repulsed, largely through the effect of

a few unequivocal court decisions and the stiffening resistance of organized medicine. There is even now, in New York State, a bright chance of regaining some of the lost ground, by means of the new Compensation Law and the current action against the Life Extension Institute. * * * The most certain way for the physician to destroy his social esteem would be to permit his economic status as an independent servant of the sick to be destroyed."

AT A MEETING IN New York on August 13th, the American Child Health Association discontinued its activities. The reason for this lay in the fact that the aims and purposes for which the Association was formed have been, in large part, accomplished. This was the gist of the presidential address made by Dr. Samuel M. Hamill of Philadelphia.

IT HAS BEEN LEARNED that the topic which has been selected for debate among over one hundred thousand high school boys and girls in thirty-one states is to be the following: "RESOLVED, that the several states should adopt a complete system of medical care available to all people, at public expense." The subject of the debate has been fostered by both the Rosenwald Foundation and the Pollak Foundation as a continuation of their hitherto unsuccessful efforts to bring about the socialization of medicine. These young debaters will, in some instances, turn to members of the profession for advice and counsel as to how to conduct the debate and it should be the purpose of every one to help them formulate their ideas. We are in accord with the suggestion made by the Westchester County Medical Society that the County Society should and undoubtedly will take steps to supply the debating leagues with reliable information and data.

MEDICAL RADIO BROADCASTS

The Medical Information Bureau of the New York Academy of Medicine announces the following broadcasts from Station WABC and the Columbia Broadcasting System network:

Thursday, Oct. 17, 1:15 P.M.—*Speaker:* Dr. William B. Parsons, Assistant Professor of Surgery, Columbia University. *Subject:* "Goiter."

Thursday, Oct. 24, 1:15 P.M.—*Speaker:* Dr. Robert H. Kennedy, Surgical Director, Beekman Street Hospital. *Subject:* "Broken Bones."

Thursday, Oct. 31, 1:15 P.M.—*Speaker:* Dr. William Crawford White, Associate Attending Surgeon, Roosevelt Hospital. *Subject:* "Progress in Cancer."

Thursday, Nov. 7, 1:15 P.M.—*Speaker:* Dr. Samuel J. Kopetzky, Professor of Otolaryngology, New York Polyclinic Medical School. *Subject:* "Exploiting the Deaf."

Patient: "Doctor, I feel like killing myself. What shall I do?"

Doctor: "Just leave it to me."

—*Nebraska State Medical Journal.*

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

A New Racket

416 OCEAN AVENUE
BROOKLYN, N. Y.

To the Editor:

It will interest the medical profession in and around New York to know that a new form of racketeering by unscrupulous and debased physicians is being practiced upon their fellow practitioners. At least the writer, in over a quarter of a century of practice, never heard of this scheme before and only learned of it recently when he became a near-victim of it. The racket is based on the typical gangster "paying for protection" method and may be termed "case piracy." Whereas the fee-splitter (assuming that fee-splitting exists, although questionnaires in and out of medical societies would prove that "no doctor, anywhere, has ever heard of such a thing") makes his "claim" on the ground of what he has done for the doctor to whom he has referred a patient for operation, the case pirate demands payment for what he has refrained from doing to the doctor. The fee-splitter does have some connection with the patient; the pirate simply chisels in on a case with which he has no connection—often not even knowing the patient's name—and demands tribute in order "not to spoil the case for the doctor," meaning that he would deliberately besmirch the doctor to the patient and "steer" the patient somewhere else. There is no doubt that a low-down snake of this type is capable of doing it. When the physician is approached by such a crook, the fact that he knows about the case leaves the physician in a quandary as to just how close to the people this individual really is.

Having recently been the near-victim of this scheme I have found out how it works.

Suppose a Mr. A is a patient of Dr. B. A needs anectomy, but is waiting for either the time or the money to go through with it. Perhaps he is putting it off until his vacation or for his wife to return or to sell something with which to raise funds. Let us say he is a clerk in a cigar store or he runs a grocery store; he is also quite talkative and is telling many of his customers about the operation that he is going to have done. Among these customers is a Dr. X or a Dr. Z who, when

he hears about it, finds out, casually of course, the surgeon's name who is going to do the operation. The patient, Mr. A, may have been going to the doctor for weeks or months previously, but that doesn't mean anything to the pirate. He immediately calls up Dr. B on the phone and tells him that he is "in a position" to work with him on Mr. A's case—for a consideration (the inference being that just as he can boost him, he can also knock him). In the attempted extortion of the writer, the pirate was quite frank about being able "to spoil the case." Knowing how some patients can easily be influenced by others, especially by another physician, the unsuspecting doctor is likely to "come across." If the pirate actually knows the patient he may prevail upon the patient to insist on bringing him along to Dr. B when he goes there—thereby proving to Dr. B the advantage of "being in with him." . . .

In my experience of this attempted extortion by this piratical crook who tried to chisel in on the case six weeks after the patient had originally come to me and who had been referred by another man as well as by another patient, I discovered afterwards that the patient had never sought the crook's advice as to my surgical qualifications and that the crook himself didn't even know his last name. He only knew his first name. Yet he had the effrontery to come in person to my office to prove to me "his side of the case" that he was entitled to a fee for his part in NOT spoiling the case for me. It was much like the condemned man who is taken away to the electric chair who is talking over and over again to his friends because "he had been fair" to them. His victim: he had given them a chance before shooting him down. The distortion is evident in these circumstances.

I might add that this crook was a member of his county medical society connected with a certain hospital (Shades of Mephistopheles). What about the medical practice of this

October 1, 1935

Society Activities

Malpractice Insurance Committee

The Yorkshire Indemnity Company of New York has been selected as the carrier of the Group Malpractice Insurance Plan of the Medical Society of the State of New York beginning January 1, 1936. All new certificates under the Society's master policy dating on or after January 1st will be issued by the Yorkshire. The Aetna Life Insurance Company will carry to expiration all policies issued by that company, that is, all policies in the Aetna issued up to and including December 31st of this year will be carried by that company until they expire in 1936, at which time they will be renewed in the Yorkshire.

For the benefit of members who would like to know something more about the Yorkshire, your Insurance Committee offers the following report:

The Yorkshire Indemnity Company is a New York corporation organized under the laws of this state in 1926. It is not a large company as compared with some of the great companies of today, but it has over \$2,000,000 of sound admitted assets in this state.

However, the test of the security which a company offers to its policyholders does not depend upon size, but upon good underwriting, sound and economic management, adequate reserves for undischarged liabilities of all kinds, adequate net resources, sound investments and dividend policy. A large company may be in a questionable situation with respect to some or all of these items and, therefore, offer doubtful security to its policyholders, while a small company may be so strongly organized, financed and managed as to offer the best possible security to its policyholders. The Yorkshire Indemnity Company falls in the latter class as clearly indicated by the rating given it by Best.

The Alfred M. Best Company of New York is generally accepted as the leading authority in the country on insurance company ratings. Its analyses cover every detail of organization, financial position, reserves, management, etc., and are reduced to ratings

running from A for excellent to E for poor. In addition, it reclassifies those companies in each rating group which are above the average of such group and adds a plus sign after the rating letter. Thus, A+ is the highest rating that can be given to any company, and assures to the policyholders the strongest possible security behind their policies.

Your Insurance Committee is glad to report that the Yorkshire Indemnity Company enjoys an A+ rating by Best, and that it has held that rating throughout the pressure of depression years which has tried the stability of much larger and better known companies, some of which have found it difficult to survive. In addition to this, the Yorkshire has behind it as a parent company the Yorkshire Insurance Company of England, one of the oldest and most conservative insurance companies organized in 1824 and transacting a highly reputable world-wide business with assets of over \$75,000,000.

It will be understood, of course, that all of this was given first and thorough consideration by the Society before the Yorkshire was designated as the carrier of the Group Plan. It is being published in this manner, however, for those members whose private insurance representatives have, for reasons best known to themselves, seen fit to loosely criticize the Yorkshire's position and to create doubts as to the wisdom of accepting its policies. Such criticism cannot be well informed or have as its object the malpractice insurance welfare of the members or the solidarity of the Group Plan as a whole.

Every phase of the Yorkshire's situation so far as it may apply to the Society's Group Insurance has been scrutinized and passed upon. Not only is the Yorkshire entirely sound as indicated by its general rating, but in the opinion of your Insurance Committee it offers under its agreement with the Society the best source of malpractice insurance protection obtainable.

CHAS. GORDON HEYD, M.D., *Chairman*

Committee on Public Health and Medical Education

The Committee on Public Health and Medical Education of the New York State Medical Society wishes to urge upon County Medical Societies the necessity for having an active committee on Public Health. It

is most desirable that some members of this committee be interested in pediatrics and health activities for children.

It is probable that Federal funds will soon be available for the State Department of

Health to expend on child health work. It is necessary, therefore, that County Societies be well organized to take the leadership in directing these activities, if physicians in active practice are to do the work and be compensated for it.

This Committee of the State Medical Society approve, the following and suggest that the County Medical Societies undertake as many of them as possible:

- 1 Pre School Examinations
- 2 School Health Programs
 - a Active cooperation with school health authorities
 - b Appoint advisory committee
 - c Improve forms used for examinations

d Physical Examinations by private physicians

3 "Children's Health Hour," in physician's office for health measures, including immunizations against communicable diseases

4 Intensive effort to improve the care of premature infants

The Sub Committee on Child Hygiene will be glad to act in an advisory capacity to aid in the development of your plans for the work outlined above.

Sub committee on Child Hygiene

FAIRFAX HALL M D *Chairman*

LEO F SCHIFF M D

OLIVER W H MITCHELL M D

Minutes of Annual Conference of County Society Secretaries

DEWITT CLINTON HOTELL, ALBANY, SEPTEMBER 10, 1935

The following thirty three County Societies were represented:

Albany	Dr Nelms
Bronx	Dr Friedland
Broome	Dr Quackenbush (sub)
Cattaraugus	Dr Garen
Cayuga	Dr Maxwell
Clinton	Dr Wessell
Columbia	Dr Galster
Cortland	Dr White
Delaware	Dr Thomson
Frie	Dr Beamis
Essex	Dr Gau
Genesee	Dr Di Natale
Jefferson	Dr Prudhon
Kings	Dr Raphael
Monroe	Dr Mac Vay
Montgomery	Dr Pierce
Nassau	Mr Neff (Exec Secy)
New York	Dr Irving (Asst Secy)
Niagara	Dr George
Oneida	Dr Hale
Onondaga	Dr Sutton
Orleans	Dr Roach
Otsego	Dr Atwell
Rockland	Dr Ryan
Schenectady	Dr Shapiro
Schoharie	Dr Odell
Tioga	Dr Peterson
Ulster	Dr Gannon
Warren	Dr Maslon
Washington	Dr Banler
Westchester	Mr Bryan (Exec Secy)
Wyoming	Dr Klostermyer
Yates	Dr Hatch

Others present were Dr Frederic E. Sondern President of the State Society, Dr Edward G. Whipple member of the Public Health Committee, Dr Frederic E. Elliott Chairman of the Committee on Economics, Dr Harry Aranow, Chairman

of the Committee on Legislation, Dr James F. Rooney Trustee, Dr Thomas H. Cunningham First Vice President, Dr Charles Stover Past President, Mr Dwight Anderson Director of the Public Relations Bureau, Dr George M. Richards President of the Rockland County Medical Society, Dr Horace M. Hicks, Dr Edward C. Podvin and A. W. Bailey, D.O., members of the Industrial Council, Dr H. Jackson Davis Medical Director of the WPA, Dr George H. Ramsey Director Division of Communicable Diseases, State Department of Health, Mr Michael Murphy, Acting Director of Compensation Division, State Department of Labor and Dr Joseph S. Lawrence, Executive Officer of the State Society.

The Conference was called to order by the Assistant Secretary, Dr Peter Irving, who announced that Dr Dougherty, the Secretary, could not be present and in his absence he would act as chairman of the Conference.

The first speaker was Dr Edward G. Whipple representing the Committee on Public Health and Medical Education who outlined the drive that is to be made against pneumonia this winter. He stated that there is inclined to be a failure on the part of the membership of the State Society as a whole to appreciate the work of the standing committees. Membership on these committees means a sacrifice of time and money and the deliberations of the committees are in every instance of benefit to the membership. The Committee on Public Health and Medical Education is a very active com-

mittee, led by a chairman whose ability is only equaled by his enthusiasm. Among the many subjects recently considered by the committee, an organized effort against pneumonia has been most outstanding. A subcommittee, headed by Dr. Russell Cecil, has formulated plans, not yet complete, to cooperate with the State Department of Health, and possibly some private agencies, to lessen the morbidity and mortality from pneumonia. Any such effort by organized medicine necessitates on its part: (1) Willingness of the physicians of each County Society to assume leadership in their county in health matters; (2) An organized County Society including *at least* active and interested public health and public relations committees; (3) A medical profession well-informed on the subject of pneumonia. This latter necessitates an intensive and recent review of the subject. On the part of the State Department of Health, it is essential that they provide readily accessible laboratories and technicians and available sera for Types I and II pneumococcus pneumonia. In a review of the subject, physicians must know that there is a pneumonia problem; that 50 per cent of pneumonias are due to pneumococci; that 30 per cent of these are Type I; that mortality from Type I can be reduced 40-60 per cent by the giving of Type I serum sufficiently early, in sufficient doses, and sufficiently often; that it is *not* necessarily a useless procedure to give serum after the fifth day of the disease; that there is a Type II pneumococcus serum, probably as productive of results as Type I serum; that Type I serum is now available from the State Department of Health and it is hoped that Type II serum will be available very soon. Reactions will occur but can be met by the proper use of 1-1000 solutions of adrenalin chloride. Many may be avoided by reading carefully the instructions accompanying the serum from the State Department of Health or the manufacturer. Even though there is a delay in providing funds for a detailed effort against pneumonia, much can be done by each County Society, as leaders in health in their community, to conduct locally such an effort under the guidance of the Committee on Public Health and Medical Education of the State Society.

Dr. Ramsey, of the State Department of Health, stated that the Association of Public Health Laboratories offered to assist in the reduction of pneumonia mortality by making available for the practicing physicians facilities for employing the latest methods of type determination, and the State Laboratory is manufacturing the concentrated

serum which will be supplied to the laboratory produce distributing posts throughout the State. The department will cooperate further by distributing pamphlets and other educational material. Its full cooperation will be limited for the time owing to the fact that not sufficient funds were appropriated for the purpose by the last Legislature. There is some hope that the department may have its funds supplemented by gifts from certain voluntary, interested agencies. In cities of the first class the serum will be obtained through the local department of health.

For the effective direction of the State-wide program, a committee will be formed consisting of representatives of the Public Health Committee of the State Medical Society, the Association of Public Health Laboratories, the Department of Health, and certain other voluntary agencies. All of the speakers emphasized the fact that the success of the work depends primarily upon the wholehearted cooperation of the practicing physician. The diagnosis of pneumonia must be made early and serum treatment started immediately if success is to be achieved. Mr. Anderson, of the Public Relations Bureau, offered his assistance in publicizing the work. At the close of the discussions the Conference adopted the following resolution:

Resolved, That the secretaries of the component County Societies of the Medical Society of the State of New York, enthusiastically endorse the program of the State Society to reduce mortality from pneumonia.

At this point Dr. Irving read a telegram received from Dr. Dougherty expressing his regrets at being unable to attend the Conference and extending best wishes to his brother secretaries.

In the absence of Dr. Kaliski, who was to speak on the new Workmen's Compensation Law, Dr. Frederic Elliott, a member of the Special Committee on Workmen's Compensation, substituted for Dr. Kaliski. He stated that neither insurance companies nor employers in industry may post lists of authorized physicians. He stated further that he and Dr. Kaliski, at the direction of Dr. Heyd, have been conferring with representatives of insurance companies and employers of labor regarding a fee schedule, which the law provides shall be offered by the President of the Medical Society. He also reported that through conference with the State director of the WPA an arrangement is being developed by which physicians enrolled on the workmen's compensation panel will be employed and that injured employees will be given the same privilege of selection as is accorded industrial em-

ployees In speaking of the classification of physicians by County Societies, he called attention to a communication that had been sent by the committee to certain County Societies for reclassification and he urged that all communications from County Societies regarding the details of the law be addressed to the committee,—in other words, the special committee of which Dr Heyd is chairman, is a liaison committee.

There was some discussion as to how the reporting forms should be distributed whether by the Department of Labor or the County Societies through the secretaries. A number of the secretaries objected to the extra work that is being placed upon them, especially in light of the fact that most of them have no assistance and in some instances no extra funds have been provided for the incurred expense. That brought up the question as to how many of the County Societies are collecting extra funds for financing the work. It was reported that the following charges are being made: Two County Societies charge the registrants \$5.00, five charge \$3.00, seven charge \$2.00, one charges \$1.00, and sixteen of the secretaries stated that their Societies make no charge.

Dr Elliott, in response to a question as to the status of the medical bureau, stated that established bureaus may continue but that is not a license for new bureaus to open up. Moreover, if the employer insists upon conducting a bureau without a license, bring charges against the employer, if he is obtaining medical practice for a certain doctor, charge him with solicitation.

Dr Podvin, a member of the newly created medical division of the Industrial Council, stated that the Council took the addition of physician members very seriously. Employing his own words:

A subcommittee of which I am chairman has been appointed to deal with medical questions. When we went down to the first meeting we were rather shaky and thought the fellows might not agree with us on any subject. We have found them our most ardent supporters. In the subcommittee there are four members—Dr Linder, myself, Mr Meyer representing employers, and Mr Curtis representing labor. When we first started to discuss problems we found that the laymen on our committee not only were opposed to having in the poster permission to post names but insisted on putting in clause that names must not be posted. When it came to question of surrendering of choice of physician by the employee they were the ones that suggested this clause:

You may recommend the name of an authorized physician to an injured employee if requested to do so in writing after an accident. (Item No. 2)

You shall not ask for or accept a waiver from any employee depriving him of his right of free choice of an authorized physician before an acci-

dent occurs or at any time as a condition of employment. (Item No. 3)

Those were both put in there by the lay members. We felt that if we didn't do anything about the possibility of a serious accident there might be some question, so we included the following:

In the event of a serious accident requiring immediate medical aid an ambulance or any doctor may be called to give first aid treatment. (Item No. 6)

This is in the law now, any doctor can treat an emergency. First aid treatment is to consist of one treatment. This committee was appointed at the first meeting of the Council and I am going to discuss some of the points which were included in the report presented yesterday at the meeting held in New York City.

The first meeting of our subcommittee was taken up with the matter of arranging the poster, also the decision that all doctors whose applications had been disapproved by the various County Medical Societies, may continue to treat workmen's compensation cases until final decision is rendered by the Industrial Council. At a later meeting we took up the question of C-4 reports. This report is the one you make at the end of twenty days. That report should be notarized and the reason is that it insures the value of the report as prima facie evidence when filed in compensation claims. At that meeting we took up some of the rules of procedure for arbitration committees and discussed the question of the method of registration of the osteopathic and homeopathic physicians.

We devoted one meeting to hearing some of the representatives of hospitals. Hospitals feel that all services rendered in the hospital by the doctors is part of the hospital service. Your representatives on the Council backed up by the State Committee insisted that it is perfectly plain in the law that pay for compensation medical work shall be given only to the doctor rendering the services that x-ray pathology, anesthesia, etc. is the practice of medicine. You know it is very easy for us to sit down and come to an agreement as to what should be done but when you do it from the standpoint of a State Department you have to safeguard yourself not only against argument of right and wrong, but you have to safeguard yourself against any future legal action that may be taken to upset your decision. Therefore we decided to hold another session of this special committee at which representatives of the hospitals and our own committee will be present to thrash this thing out so that if later they want to make a test case they can't go into court and say they didn't have an opportunity to talk the thing out.

On the question of registered physiotherapist the committee recommends that a registered physiotherapist may treat workmen's compensation cases at his own office or bureau when the case is referred to him by a licensed physician. Authorized physician however should give written order to the physiotherapist as to kind of treatment and number of same.

Now about the removal of doctors from the panel as provided in Section 13-d by the Medical Society or board that has recommended

authorization of physicians. The committee drew up the following sketch: The doctor accused of misconduct shall be notified as to the date and time of hearing. A careful record shall be kept of the hearing. That record shall be submitted to the Commissioner. Now the matter is before the Commissioner and then comes the appeal. Appeals will be submitted to the subcommittee. The doctor appealing and the Medical Society or its board shall be notified in writing as to the date of the hearing. The doctor may be represented by counsel. Stenographic reports are to be kept and findings submitted to the Industrial Council.

As to question of arbitration: It is estimated that we are going to have a great deal more arbitrating under the new law than under the old. Under the old law many men had direct contact with the insurance companies and did not dispute the amount paid them by the insurance company even if lower than their original bill; or if they did dispute it very few cases came to arbitration because the doctors felt they did not want to offend the insurance companies. Now it is thought that there will be a great many cases. In the event of disagreement as to value of medical service rendered, hearings shall be held in the county in which the doctor practices or in locality where his office is located. It was thought that the State should be divided into districts; that is, the present industrial districts, of which there are five, so that when these hearings are held it might be by district instead of by county. Notice of the hearing shall be sent to the doctor who has rendered the service, the employer, and the insurance company, any one of whom may be present if he wishes. The arbitration board shall pass upon the case. Careful records of the hearing shall be kept in the office of the County Society.

I should like to speak about one or two things in the matter of the local boards which had refused to qualify certain men to practice under this act and afterwards seemed to get a change of heart and sent in their names. The members of the Council felt that that was a very poor practice. Therefore, the committee makes the following suggestions: That in the event of the rejection of a physician by a County Medical Society, the jurisdiction of the Society has terminated and it cannot reconsider its action. A man has the right to appeal, but the court set up by law is the Industrial Council and the appeal should go there and not back to the committee that has already passed upon it. In order to do this, each County Medical Society must pass upon an application within thirty days after its receipt and notify the Industrial Commissioner as to its action.

The committee suggests—and this was approved at the meeting yesterday—that bills for x-ray and other specialists be made out separately and be submitted by the doctor in charge of the case and paid directly by the employer to the doctor rendering the service. The doctor in charge is the responsible party. The bill of the specialist should be separate but should go in with the bill of the doctor, but the check for payment should come to the individuals who rendered the service. Upstate they have been sending in the bills in toto and when the doctor

gets the check sometimes he forgets about the other fellow.

There is one sentence in the law that a good many of the New York men seem to misinterpret; that is about authorization of a specialist—a man who receives in excess of \$10.00 or \$25.00. The law states that authorization must be secured from the employer or the Commissioner. The Commissioner is only put in there so that if you are refused authorization, the Commissioner might be called upon. Therefore, the authorization of their services should be secured from the employer or insurance company, but that is all; they have nothing to say about who shall do the operation. They have been doing that in New York and it is illegal. They have a right to send a medical inspector to agree that the operation is necessary.

In response to questions, it was stated that authorization for special services need not be in writing although it is to be preferred; that hospitals may not operate a medical bureau for the care of compensation cases; the City of New York must secure a license for its clinics; the attending physician must be the judge as to when emergency treatment ceases.

At Dr. Podvin's request, Mr. Michael Murphy, Acting Director of the Compensation Division in the Department of Labor, was introduced. He emphasized the importance of the physician reporting within the 48-hour period his acceptance of a compensation case; urged that the report contain a detailed statement of the case, and recommended that it be notarized so that in the event, if later there should be trouble, the report can be used as a legal document. In the event that cases are transferred, the physician receiving the case should make a report upon it as he would of any other new case coming to him, and this in spite of the fact that he should receive from the preceding physician a complete statement of his findings and what he had done. He stressed the importance of sending to the Division of Workmen's Compensation in the district, carbon copies of all reports that are submitted to the employer and to the insurance carrier. He urged the physicians to submit promptly, conscientious estimates of the period of disability. The difficulty of making an accurate estimate is recognized, but if the period must be extended there is no prejudice to the case, while if the period is not mentioned a very definite prejudice may arise.

After luncheon Dr. Irving introduced Dr. Sondern, President of the State Society, who said in part:

I am very glad to be present today and I feel that the secretaryship is the most important job in a County Society. As to the matter of workmen's compensation, this law was framed and the medical profession was given its first

opportunity to administer a law that had to do with itself. If the public realizes we are doing this job well, then in the future any job that has to do with the medical profession will fall into our hands. Relative to the pneumonia matter and the venereal disease matter, much could be said about both, but in your consideration of it I would like to say that at the recent meeting in Saratoga of the public health officers of the State, I took the liberty of making a statement that I would like to impress on you. We must, whenever opportunity presents, make clear to the people of the State that we are in favor of everything that is done for the good of the people and the good of the State by the public health authorities, just so long and just so far that they play fair with the profession. I called attention at that time to the function of the public health authorities on the one hand and the medical profession on the other. All environmental procedures, everything that has to do with public health that the public health authorities should do—if it is within their sphere, we should help them. Every facility that they can get from progress in the science of medicine should be made available to every sick person and to every physician who takes care of such sick person. But the care of the individual that is sick, the protection of his health when he is not sick, is a personal service and that personal service is the prerogative of the practicing physician and a thing with which the public health authority has absolutely nothing to do. It is the duty of the public health authority to see that the profession as such does its job properly. If we don't treat syphilis or pneumonia as we should treat them, then you can not blame the public health authority, in the interest of public health for taking your place. But so long as you do your duty so long as you are modern, so long as you take care of these people in a personal capacity it is your service and not a public health service. The public health duties must be to develop the environmental service to the best of its ability. It is your duty to keep modern in touch with every development so that you may be able to use the facilities that are put at your command and not to give the public health authorities the opportunity to say that you are not doing what you should in the light of present medical knowledge. I think we are all awakening to this fact, also the public health authorities are awakening to a little sharper line between their duties and ours. All of us that have to do with organized medicine in any way are proud of our men and of their progress. I can assure you that in the short time I have had the privilege and honor of being your executive officer, what I see makes me feel that it is a thing to be proud of.

In closing his remarks of the morning, Dr. Podvin suggested that the following procedure be used in selecting arbitration boards. That instead of the president of the County Society naming two persons, he submit a list of ten or twelve names to the Commissioner of Labor with the request that he make a selection from that list.

Dr. Aranow, Chairman of the Committee on Legislation, was introduced and offered the following recommendations. That only men with political sense or experience be appointed members of the County Legislative Committees, that close relationship be established with political leaders and legislators, that the committees endeavor to enlist the interest of local humane societies in attacking anti vivisection bills, that the committees should prepare themselves to combat abuses that may arise in the administration of the new Workmen's Compensation Law, in opposing any new chiropractic bill, in overcoming the legal objections to our physicians' lien bill, in ascertaining the reaction of physicians in the Society to nurse anesthetists, and to dispensary abuses.

Dr. Elliott, Chairman of the Committee on Economics, said there are three economic issues squarely confronting the physicians. First encroachment on the field of the private physicians by the hospitals, second, contract medical practice and, third, compulsory health insurance. With regard to the first he felt that the Society has a duty to see that legal objection to the practice of medicine by a corporate body be made definite, to the second he stated that in New York City a large business concern, within the last two months decided on a pay-roll deduction of from 12c to 32c a week and with this amount were employing physicians on contract to render services to the employees. He warned the secretaries that the Federal Government has not abandoned its objective of compulsory health insurance.

Dr. Prudhon, Secretary of the Jefferson County Society, called attention to the lack of regulation over medical activities in small rural hospitals and convalescent homes. After hearing his discussion the Conference adopted the following resolution:

Resolved that it is the feeling of the Secretaries' Conference that the establishment of standards of small community hospitals and nursing homes be studied by the Public Relations Committee of the State Society.

Dr. Odell, Secretary of the Schoharie County Society, suggested that County Societies having good programs might invite neighboring County Societies to their meetings, or might report to secretaries of neighboring Societies the good features of their programs.

In response to a request that there be a "clearing house" on programs, Dr. Lawrence said that the Albany office is maintaining a file of that character at present. Its sources of information are almost entirely the newspapers, and he asked that

the Secretaries cooperate with him in developing that file.

Dr. Garen, Secretary of the Cattaraugus County Society, gave a very illuminating report on the number of physicians in his county receiving some income from governmental sources. The Conference thought the Economics Committee might make a similar study of every county. Dr. Elliott responded that Dr. Garen is a member of his Economics Committee and this was a partial report on a subcommittee's activities.

Dr. H. Jackson Davis, having been invited to confirm what was stated with regard to the policy to be pursued in securing medical care for persons engaged under the WPA, made such confirmation and stated further that at present employees on the WPA are expected to pay for such medical

services as they and their families may need, from their earnings, and not to expect supplementary relief; but, in his opinion, the policy will likely be changed because the wages are too inadequate to cover all the workers' financial obligations including medical care. He forecast that complaints over disputed bills and other debatable matter will be more promptly handled as the machinery of the new regime becomes established. He stated that the WPA is prepared to adopt the programs for providing medical care as rapidly as the Workmen's Compensation Committee develops them.

There being no other questions or matters to be discussed, and the hour of 3:45 P.M. having arrived, the Conference adjourned.

JOSEPH S. LAWRENCE, M.D.,
Executive Officer.

AMONG OTHER THINGS

The Arizona legislature has passed, and the Governor has signed, an act to license naturopaths to practice in that state. The Governor, Dr. Moeur, is a physician. Says *Southwestern Medicine*, organ of the state medical association: "How a Governor who had made an honorable living in the life-long practice of medicine could fail to veto this pernicious menace to the public health when it came before him, is more than we can understand."

Mike, badly injured in an accident, was rushed to a hospital where his wife soon followed. A surgeon went to the ward with her. At the door he saw a sheet was over the patient and said to her, "Madam, your husband is dead."

A voice from under the sheet said: "Naw, I'm not."

The wife replied, "Hush, Mike, the doctor knows best."

—*Wall Street Journal*.

The following laughs are by-products of cross-examination of witnesses before the Industrial Commission of Colorado. They have been collected by J. C. Peters, court reporter, and they are furnished to *Colorado Medicine* by request.

Question. Do you think you would be better off with that finger amputated?

Answer. Well, I don't know; I never had it off.

* * *

Q. Is your husband living? A. No.

Q. Is he dead? A. Yes.

Q. How many children have you? A. Five.

Q. How many are boys? A. Three.

Q. Are the other two girls?

* * *

Q. Are you getting any better as time goes on?

A. No, I don't think I am. I think my weakness is getting stronger.

Health was advertised in a big way at the Rochester Exposition in September by exhibits prepared by committees of the County Medical Society and other health bodies. The committee on the care of eye defects, collaborating with other organizations, had a booth displaying aids to vision and giving information on saving sight. Tests were given, illustrations of eye hazards shown, and symptoms of defective vision described.

Another committee joined with representatives of the Tuberculosis Association and the Bureau of Milk Publicity in a display urging the drinking of more milk. Another exhibit showed modern ways to fight tuberculosis. Aids to physicians and nurses, including the x-ray, the tuberculin skin test, the pneumothorax treatment of the lungs and sputum analysis were demonstrated. The exhibit was sponsored by the Tuberculosis Subcommittee of the County Medical Society.

The Monroe County Society for the Handicapped had an exhibit showing how to help crippled children, including the hard of hearing and those whose sight is imperfect. The society has been far reaching and this past year had a case at Warm Springs Foundation, a case at the Reconstruction Home at Ithaca, a case at General Hospital, besides other cases in their homes.

County Societies

Albany County

Practical application of the "Detroit Plan" in Albany County raised, in 1934, the number of children under 5 years of age immunized against diphtheria from 32 per cent to 54 per cent.

Because of its value as a model of county society action, the report of the Public Health Committee is reproduced here in full detail.

DIPHTHERIA PREVENTION

REPORT OF THE PUBLIC HEALTH COMMITTEE
of the
ALBANY COUNTY MEDICAL SOCIETY
on the

PARTICIPATION PLAN IN PREVENTIVE MEDICINE

For several years there has been a feeling in the Albany County Medical Society that physicians should take a more active interest in preventive medical procedures and include them as a part of their regular office practice. One of the simplest and at the same time the most important of these preventive procedures is diphtheria prevention.

Your Public Health Committee has been studying and considering means of encouraging the members of this medical society to take an active interest in and to participate in preventive medical measures on a city-wide scale that would establish their offices in the minds of the people, as the place where preventive medical services are available.

The Albany City Department of Health and the Albany Board of Education had previously been carrying out diphtheria prevention inoculation in the city hall and in the public schools. Representatives of these two official agencies met with the Public Health Committee and plans were formulated that met the hearty approval of each group.

Dr. Henry F. Vaughan, Commissioner of Health, Detroit, Mich., came to Albany twice and outlined the Medical Participation Plan that has worked so successfully in Detroit. At these visits, meetings were held with the Mayor and his cabinet, small meetings with the representatives of the City Department of Health and the Board of Education and large meetings of the whole County Medical Society and other interested persons.

The Participation Plan for Diphtheria Prevention as finally evolved and found suitable to all agencies involved, is prac-

tically the Detroit Plan with such modifications as would more successfully meet the conditions existing locally. This plan was approved on its general outline by the State Medical Society at its meeting in New York City in May 1933, and by the Albany County Medical Society on June 27, 1934.

ESSENTIALS OF THE PLAN

1. The Public Health Committee of the County Medical Society, of which the local health officer is a member, acts as the planning board.
2. Committee meetings are held one each week throughout the year, except during the months of July and August.
3. A printed statement of the plan to be proposed at the regular meeting of the County Medical Society is mailed to each member one week before the meeting at which it is to be considered.
4. All plans are developed within the Committee and approved by County Medical Society at a regular meeting before being announced to the public.

To include the city health officer, the chief school medical inspector and other representative of the official health agencies is considered necessary to the success of the plan.

Weekly meetings have been found necessary if well thought out programs are to be presented to the society. The presentation of immature, impolitic or impractical plans to a group the size of the county medical society definitely retard the progress of any sound program.

It is deemed important that each member is fully informed on all proposals before the meeting is held. This provides the membership of the society with time to consider each step carefully.

No plans are released to the press, except after they have been approved by the society as a whole.

THE PROCEDURE

1. The form of agreement that the P. H. Committee proposed to the County Medical Society and found acceptable to the medical profession, to the city health department and to the school officials, will be found at the end of this article (See Appendix A)
2. After this was adopted as a working plan, a printed letter was sent to each member of the county Medical Society giving details of the working program. (See Appendix B)
3. With this was sent a post card with the return address of the Public Health Committee. On this card the physician designated the days and hours that he would be in his office ready

to do this special piece of preventive medical work. (See Appendix C)

4. The names of the physicians who signed and returned these cards were printed in alphabetical order and used as a part of the educational work. (See Appendix D)

5. As a part of the educational work of the campaign, a letter "To the Parents" was printed and distributed by the public health nurses, school nurses, and others as described under "Nurses." (See Appendix E)

THE WORK

A. The active propaganda work was done largely through the City Department of Health and through the city schools; precedent for the medical profession remaining in the background in this field is traditional.

1. Some item of interest and importance appeared in each newspaper every day. Pictures were found especially helpful.

2. Talking moving pictures films were furnished to each theatre. These were supplied by the Metropolitan Life Insurance Co. and the State Department of Health free of charge.

3. A ten or twenty minute discussion of diphtheria prevention was given at each school in the public and the parochial systems. This was continued until every child had heard at least one of these talks.

Particular stress was placed on the importance of diphtheria immunization in the preschool group. Pupils with preschool brothers and sisters were asked to take the sheet "To the Parents" to their homes and explain the matter to their elders. Many parents commented on how their children succeeded in convincing them.

B. The Public Health Nursing service is a highly essential part of this plan. Attention is directed to the statistics showing the amount of nurses' services needed and used in this campaign.

The committee would not expect a successful outcome, if the amount of the public health nursing service was below that available in this campaign.

While general educational work is necessary to move the mass of the people, the direct individual appeal of having a trained public health nurse ring the door bell and present the subject properly is the one that gets the best results.

Lists of the names and addresses of children 5 years of age were obtained from the annual school census and from the birth certificates of the local department of health.

The births of the past five years were put on a spotmap and the city divided into districts, so that each district would have about the same number of children. The nurses then started making house to house calls and each evening reported the names on their list that they had seen that day.

C. The cooperating physicians were in their offices at the hours they had chosen ready with equipment and fresh toxoid to render the service.

THE RESULTS

The estimated population of children under 5 years of age in Albany in 1934 is 8,591, and the number of births was 2,343 for the year 1933.

The estimated population of children from 5 to 9 years of age was 8,202. This is the number found by the school census enumerators.

Prior to this year's campaign 2,745 children under 5 years of age had been reported as having received complete inoculation against diphtheria. Every day the nurses reported a number of children whose parents said they had been inoculated in previous years. Inasmuch as the physician had not reported these inoculations, no record was made of these reports.

During the campaign 1,884 children under 5 years of age were given complete immunizing treatment. There were 153 more who took the first dose but did not return for the second dose of toxoid.

There can be no doubt that the two dose immunization with toxoid made the number of incomplete treatments much smaller than would have been the case if a three dose technic had been used.

It is hoped that during the Diphtheria Campaign of 1935, a one dose technic will be available which will eliminate even the small loss that has occurred this year.

The addition of 1,884 children under 5 years of age to the 2,745 children of this age group immunized in previous years, makes a total of 4,629 of a possible 8,581 or 54 per cent.

In estimating the number of children immunized under 5 years of age, it must always be remembered that the immunized five year olds leave this group each year and their places are taken by the number of persons born later, who are all susceptible to diphtheria as soon as they are six months of age.

Special effort was made in this campaign to reach the preschool children.

There were, however, 280 children aged 5 to 9 years completely inoculated during the campaign. These added to the 3,791 previously immunized means that 4,071 of these children have been immunized or 49 per cent.

The volume of nursing work used to accomplish this result is represented by 320 "nurse days." The public health nursing staff for this campaign was made up of the T.E.R.A. nurses from the city department

of health and the City Welfare Department, Albany Guild for Public Health Nursing, Veterans' Bureau, and the New York State Department of Health. The direct supervision of this entire group of nurses for the purposes of this campaign was the responsibility of the City Department of Health.

"Three hundred twenty nurse days" is the equivalent of the services of 32 nurses for a ten day period. This amount of service was used to raise the immunized population under 5 years of age from 32 per cent which it was at the beginning of the campaign to 54 per cent which it was at the close. This means that there was actually accomplished six or seven complete inoculations for each nurse's day's work.

THE ECONOMIES

As noted in Appendix A, paragraph 10, the City Department of Health paid the cooperating physicians for all cases unable to pay for themselves. Your committee feels that the family physician knows and can determine who is unable to pay much better than anyone not involved in rendering the service.

It was reported to be the experience of several physicians, that certain families in their practice would take their children to a free clinic, but when they took the children to their own family physician's office, —they paid for the service.

Due to the stringent financial situation, some interested parties feared that the cost to the city would be so great that the Participation Plan would fail.

The communication "To the Parents" (Appendix E) clearly states "A fee of \$1.00 for each inoculation has been agreed upon. Because this is approximately one-third the usual fee charges for such service, it must be paid at the time of each visit."

Twenty-one per cent of the 2,164 were paid for by the parents at the time of the service rendered.

The total cost to the city for all items including physicians, printing, carfare, stationery, etc., was \$2,637.10, and the net result is that there were 2,164 more children immunized than before the campaign was begun.

The year preceding this campaign, diphtheria occurred in one of the city hospitals in epidemic form. Before this epidemic was stopped the City, the Welfare Dept. and the T.E.R.A. spent \$2,197 on the nurses, care of indigents, and the cleaning and renovating. The cost of the entire participation plan of diphtheria prevention was only slightly more than the cost of curbing this one hospital outbreak.

SUMMARY

The city has 2,164 more children immunized against diphtheria at a cost of \$2,627.10, or slightly more than one dollar each. Fifty-four per cent of the children under 5 years of age and 49 per cent of children 5 to 9 years of age puts Albany in a very select group of American cities in regard to this important measure.

The parents have satisfaction of knowing that they can have their children immunized against diphtheria without question of their ability to pay. The work is done in the office of their family physicians, where they should go for all preventive as well as curative medical services.

The physicians have performed public service by making it possible for all of the children in the families under their care to have this protection. Parents are deflected from the "free clinic" and directed to their family physicians, their logical health advisors. Also, the physicians have received a fee (reduced) for the inoculation of 2,164 children many of whom would otherwise have gone to the "free clinics" or received no attention in diphtheria prevention.

In general, mutual respect engendered by this group of physicians representing organized medicine, the city health department and the city schools, sitting together to work out serious public health problems has been most stimulating.

Your committee is convinced that no one of these three groups could have worked out a program by themselves that would have been as advantageous to all concerned as that which has evolved by the Participation Program.

Appendix A

MEDICAL SOCIETY OF THE COUNTY OF ALBANY

PUBLIC HEALTH COMMITTEE

The Committee will present for discussion and action at the meeting June 27th, the following program:

1. That the Society, with the cooperation of the Health and Education Departments of the City, undertake a campaign of diphtheria prevention;
2. That this campaign be in October and November, 1934, and that the first inoculation be given only during the last week of October and the second, only during the last week in November;
3. That toxoid alone be used and furnished by the Health Department;
4. That the campaign be limited to infants and children 10 years and under;
5. That the fee for each inoculation, during these two weeks only be \$1.00.
6. That those physicians desiring to cooperate in this campaign sign an agreement with the

Society, specifying days and hours, during these two weeks, when they will inoculate at these rates; that they will attend a symposium in October on diphtheria; and that they report to the Health Department the name of each child so inoculated;

7. That the Education Department for the school year 1934-1935 will not hold diphtheria clinics in the public schools; nor the Health Department hold such clinics in the parochial schools;

8. That the Health Department agree:

- (a). Not to administer diphtheria toxoid in the health office or elsewhere during October and November, 1934.
- (b). To reimburse cooperating physicians at the above agreed fee schedule for every indigent case inoculated and reported to the Health Office.
- (c). To send in May, 1935, to parents of children, inoculated in this campaign a letter urging them to report back to their physician for a Schick Test, and the day and hours when each cooperating physician will be prepared to render this service.

9. That the fees charged for these Schick Tests be \$1.00 for the test and \$1.00 for the reading.

10. That the Health Department reimburse cooperating physicians as per this fee schedule for those unable to pay, and reported to the Health Department.

Appendix B

MEDICAL SOCIETY OF THE COUNTY OF ALBANY
DEPARTMENT OF HEALTH OF THE CITY OF ALBANY
DEPARTMENT OF EDUCATION OF THE CITY OF ALBANY

DEAR DOCTOR:

The Medical Society has adopted the following program for a campaign of diphtheria prevention:

1. That the Society, with the cooperation of the Health and Education Departments of the City, undertake a campaign of diphtheria prevention;
2. That this campaign be in November and December, 1934, and that the first inoculation be given only during the first week of November and the second, only during the first week in December;
3. That toxoid alone be used and furnished by the State Health Department through the City Health Department;
4. That the campaign be limited to infants and children between six months and seven years of age;
5. That the fee for each inoculation, during these two weeks only be \$1.00;
6. That those physicians desiring to cooperate in this campaign sign an agreement with the Society, specifying days and hours, during these two weeks, when they will inoculate at these rates; that they will attend a symposium in November on diphtheria; and that they report to the Health Department the name of each child so inoculated, both private and public cases;
7. That the City Education Department for the school year 1934-1935 will not hold diphtheria clinics in the public schools; nor the Health Department hold such clinics in the parochial schools;

8. That the City Health Department agree:

- a. Not to administer diphtheria toxoid in the health office or elsewhere during November and December, 1934;
- b. To reimburse cooperating physicians at the above agreed fee schedule for every indigent case inoculated and reported to the Health Office.

Five years experience in Detroit has demonstrated that preventive medicine conducted by the family physicians in their own offices, collaborating whole heartedly with the health and education department has resulted in:

1. Larger percentage of children protected against diphtheria;
2. Resulting drop in the incidence of the disease;
3. Marked reduction in total diphtheria cost to the municipality;
4. Increased income to cooperating physicians;
5. Eventual abolition of free diphtheria prevention clinics.

Such results are possible, however, only if the great body of family physicians participate actively by joining the list of cooperating physicians. This cooperation will make it possible for every child to go to his own doctor for inoculations.

Parents of infants and children between the ages of six months and seven years will receive: a "Notice to Parents" telling of the purpose of this campaign, a list of cooperating physicians with their addresses and the specific days and hours set aside by each for this purpose, and the cash fee schedule set by the Society. They will be urged to consult their own family physician if on this list, otherwise the nearest cooperating physician.

The fee schedule adopted applied only to those who report at your office on the days and during the hours specified by you on the enclosed card. Those applying at any other time may be charged your usual fee.

Cooperating physicians agree to attend one meeting on diphtheria. This will be held on Friday, November 2nd at 5 P.M. sharp at the Fort Orange Post, New Scotland Avenue. Doctors Charles K. Winne and Otto A. Faust will speak. Fresh toxoid and literature will be distributed and all questions pertaining to details of the campaign will be answered.

The future course of preventive medicine in Albany County is in our hands. We can retain it only if we demonstrate our unity and our leadership. Do your share by signing now the enclosed post card and mailing it. These cards must be received by Monday, October 12th.

Signed,

ARTHUR M. DICKINSON, M.D.
FRANCIS W. DODGE, M.D.
EDWARD S. GOODWIN, M.D.
DON M. GRISWOLD, M.D.
ALFRED L. MADDEN, M.D.
OTTO A. FAUST, M.D., *Chairman*
Committee on Public Health

October 8, 1934.

Appendix C

I agree to cooperate with the Medical Society of the County of Albany in the campaign of diphtheria prevention.

I consent to the inclusion of my name on a list of physicians who desire to cooperate in this work and agree to attend one clinical conference on this subject. I will set aside the following time during the weeks

of November 4 to 10 and December 2 to 8, 1934
 Monday Tuesday Wednesday Thursday Friday Saturday
 Hours from _____ to _____ M D

(Signed) _____
 Office Address _____

Appendix D

This contained the names, addresses and hours for immunization of 90 cooperating physicians, representing practically all men who are not in specialties industrial or state work.

Appendix E

TO THE PARENTS

During the months of November and December, 1934 the Departments of Health and Education of the City of Albany and the Medical Society of the County of Albany are cooperating in an effort to protect against diphtheria all children of Albany between the ages of six months and seven years.

The members of the Medical Society of the County of Albany have agreed to give the necessary two injections of toxoid in their offices at a minimal fee during the first full week of November and December, 1934. A fee of \$1.00 for each inoculation has been agreed on. Because this is approximately one third the usual charge for such service it must be paid at the time of each visit. If you are unable to afford this fee, the Health Department of the City of Albany has agreed to pay your doctor for this service.

In order that your physician may know when you will bring your child to his office for these inoculations we request that you fill in the attached appointment slip.

MUNICIPAL DEPARTMENT OF HEALTH
 MUNICIPAL DEPARTMENT OF EDUCATION
 MEDICAL SOCIETY OF THE COUNTY OF ALBANY

PARENTS APPOINTMENT SLIP

Name of child _____

Address _____

Date of appointment for first inoculation* _____

(Signed) _____

Physician selected _____

* Appointments may be made from November 5 to November 11. Consult enclosed list.

Erie County

NEW REGULATIONS for medical care under the Emergency Relief Bureau of Erie County are expected to iron out some of the difficulties that have been hampering the work.

Heretofore County Emergency Relief Bureau investigators have had authority to direct the disposition of county clients needing medical care. In the future, however, the sole responsibility for the disposition of medical clients will rest with the medical supervisor of each county home relief district.

District medical supervisors in turn are under the direct supervision of the chief medical supervisor, who has issued orders which will centralize responsibility in the equitable distribution of County medical home relief.

Clients receiving medical aid from the ERB of Erie County will have the opportunity of retaining their family physician and clients having no family physician will be supplied with one chosen—alphabetically arranged and in rotation from an approved list of physicians in that district—by the District Medical Supervisor.

In a cooperative effort to solve the difficult problem of the many long drawn-out chronic medical cases receiving welfare aid from the County Emergency Relief Bureau, President Bauckus, and the Comitia Minora of the Society have agreed to appoint consultants from the membership of the Society to confer with the family physician on the future care and disposition of such cases when the Emergency Relief Bureau of Erie County so desires.

Additional evidence of cooperation lies in the fact that the Comitia Minora of the Society has agreed to act in an advisory capacity to the medical administration of the Emergency Relief Bureau, but will act also as a court of appeals, and when necessary will function as a disciplinary committee in dealing with any unethical practices of physicians taking care of clients who are obtaining aid from the Emergency Relief Bureau of Erie County.

Attention again is called to the importance of receiving proper authorization from the District Medical Supervisor if the physician expects to be reimbursed by the Administration of the Emergency Relief Bureau of Erie County. In case of an emergency call, the physician must request authorization within 48 hours.

Monroe County

TUBERCULOSIS is slowly decreasing in frequency in Monroe County, according to a report of the Tuberculosis subcommittee of the Medical Society of the County of Monroe.

The report is based on a study of the deaths resulting from the disease in the county during the last six years, and was made by a committee headed by Dr. John T. Lloyd. The conclusion is contrary to that reported recently in a study made by the New York Tuberculosis and Health Association.

"Tuberculosis in Monroe County is decreasing, not increasing," the report reads. "This conclusion is inevitable when long range mortality rates are studied and is diametrically opposed to the idea created recently by published mortality figures for Rochester. In July, a New York dispatch stated that a survey made by Godias J. Drolet, statistician for the New York Tuberculosis and Health Association, showed that despite a national drop of 4 per cent in tuberculosis deaths, Rochester's 1934 mortality rate for this disease showed an 18 per cent increase over 1933 figures."

The report of the Monroe County society points out that while the New York man's figures may be correct, they do not give the correct impression as a single year's figures do not indicate a trend and for any indica-

tion of significance figures should not be used for less than a five-year period.

"The 1934 increase was due to a sharp, unusual drop in the number of deaths from the disease in 1933 and a return to the normal rate of decline in 1934," the report says.

Other members of the committee in addition to Dr. Lloyd include Dr. Ezra Bridge, Dr. S. H. Erlenback, A. M. Johnson, A. D. Kaiser, C. G. Parnall, E. K. Richard, W. A. Sawyer and E. G. Whipple.

New York County

THE MEDICAL COMMITTEE for the Defense of Ethiopia, comprising thirty colored physicians, dentists, pharmacists, nurses and technicians, announce an "energetic drive to send immediate medical assistance to the Ethiopian people." The group was organized before Ethiopia made its appeal for aid, it was pointed out by Dr. Arnold Donawa, secretary of the committee, in a statement from 2,384 Seventh Avenue. Dr. J. J. Jones of 151 West 140th St. is chairman.

The committee plans to appeal to wholesale concerns and to the public for medical supplies to be forwarded to Ethiopia.

DR. CHARLES NORRIS, chief medical examiner of New York City since 1918, died suddenly at his home on September 11. He was 67.

Queens County

THE OPENING of the Queens General Hospital in Jamaica was postponed from October 1 to October 30.

Dedicatory exercises will be held on the opening date, and during the remainder of the week, from Wednesday, October 30, through Saturday, November 2, the institution will be open for public inspection.

Actual service will be built up progressively. Members of the visiting medical and surgical staffs assigned to service in the out-patient department will be notified to report for duty on November 6, and it is planned to admit the first ward patient about November 18.

DR. CARL HUNT, a practising physician of Queens and formerly identified with the Lee Shubert theatrical enterprises as casting director and adviser, has filed suit for \$100,000 against Joseph Vernon Reed, theatrical producer, claiming he was libeled in the latter's book, "The Curtain Falls," published in 1934.

Dr. Hunt alleges that in the Reed book he was referred to as a former "horse

doctor" and "a sycophant," and that as a result of the publication he lost his job with Lee Shubert and his reputation as a doctor was damaged.

Rensselaer County

THE GENIALITY AND WARM FRIENDSHIP shown by Dr. David W. Houston, Sr., to all and sundry on the streets of Troy bring this fine tribute from the Troy *Record* on the day after his death on September 11 at the age of 78:

"Such people as Dr. Houston are a heaven to any community. They clear the atmosphere; they keep a city sweet. They offer the blessing of benignity to a materialistic age. They are not always assessed at their true value while they live; but when they pass out of the life of their town suddenly their old associates realize what such cordiality was worth and how much they have lost."

Rockland County

A MODERN \$500,000 TUBERCULOSIS HOSPITAL, with the most efficient equipment, shortly may be built in Rockland County.

Plans for such a sanitarium to be erected at Summit Park in place of the institution declared inadequate and outmoded by Dr. William J. Ryan, its superintendent, have been passed unanimously by the County Board of Supervisors.

In order to take advantage of Federal aid which soon may be withdrawn, the plans will at once be submitted to Washington and, if approved, it is expected a grant of \$204,592—about half the cost of building and equipment—will be available under PWA.

The remainder, estimated at approximately \$250,057, would be borrowed by the county probably by bond issue at the discretion of the Supervisors.

The present capacity of the institution is 46 beds, whereas, during the past seven or eight years, the hospital has had a daily average of about 52 patients and a waiting list.

The present sanitarium is a frame building and is very combustible.

Westchester County

PLANS HAVE BEEN COMPLETED for the construction of two new floors on the central building of St. John's Riverside Hospital in Yonkers at a cost of about \$25,000. This construction will provide 5,500 square feet of additional floor space allowing for 30 new beds to be devoted to medical cases. There will also be space for two solaria for semi-private cases.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Practice of Pharmacy by Aliens

A few months ago an interesting case* involving the practice of pharmacy came before an Appellate Court in one of the Pacific Coast States.

Certain Japanese who were desirous of becoming licensed pharmacists had been denied the privilege of taking the examinations to qualify as such on the grounds that they were not citizens of the United States. There was no doubt of the fact that the applicants were not such citizens, and that they were ineligible to become such citizens. The State statute regulating the practice of pharmacy forbids the registration of any persons not citizens of the United States regardless of their education, training, ability, character or the like.

The Japanese thereupon petitioned for a writ of mandamus to direct the State Board of Pharmacy to permit them to take the examination. Their application was denied, and the petitioners took an appeal to the District Court of Appeals, which directed that the ruling of the lower Court should stand.

The chief point urged on behalf of the petitioners before the Appellate Court was that the provisions of the Pharmacy Act, which had been invoked against them, were in conflict with the Treaty of Commerce and Navigation between this country and Japan, and hence were invalid. The said Treaty contained the following provisions:

"The citizens or subjects of each of the High Contracting Parties shall have liberty . . . to carry on trade, wholesale and retail, to own, . . . shops . . . and generally to do anything incident to or necessary for trade upon the same terms as native citizens or subjects, submitting themselves to the laws and regulations there established.

The Court determined that under the terms of the treaty, the whole question came down to one of whether pharmacy is a profession or a trade. The decision was that pharmacy is a profession and that for that reason the treaty had not been violated. In so deciding the Court distinguished between pharmacy as a profession, and the business of owning and operating a drug

store. The latter, the Court indicated, a Japanese could, under the State and Federal Laws, engage in. The Court said in the opinion:

The whole matter resolves itself down to the question: Is the occupation of being a pharmacist a trade or is it a profession? If the practice of pharmacy is a trade, the treaty is violated, if it is a profession the treaty is not violated. In this connection we must keep in mind the distinction between the business or trade of a druggist as the owner or operator of a drug store and the practice of pharmacy as such. A pharmacist may compound prescriptions. While he is so doing, he is exercising his knowledge of the science of pharmacy in compounding drugs; thereafter he or someone else may sell the medicine to a customer. If he does so, he becomes, in the doing of said act, a clerk or merchant. The statute which is under discussion does not prevent aliens from operating or owning drug stores or working as clerks therein; it merely prohibits them from being registered as pharmacists and from acting as such. Webster's New International Dictionary in defining the word "trade" says: "The business which a person has learned, and which he engages in, for procuring subsistence, or for profit; occupation; esp., mechanical employment as distinguished from the liberal arts, the learned professions and agriculture: as, we speak of the trade of a smith, of a carpenter, or mason, but not now of the trade of a farmer, or a lawyer, or a physician." In defining the word "profession" the same authority says: "That of which one professes knowledge; the occupation, if not purely commercial, mechanical, agricultural, or the like to which one devotes one's self; a calling in which one professes to have acquired some special knowledge used by way either of instructing, guiding or advising others or of serving them in some art; calling; vocation; employment, as the profession of arms; the profession of chemist." We are satisfied that the practice of pharmacy is a profession, and that the Pharmacy Act is not in violation of the referred to treaty.

The second argument urged by the appellants before the Court was that the provisions of the Pharmacy Act complained against, constituted an abuse of the police power, creating an arbitrary and improper classification against aliens, thereby denying to them the equal protection of the laws. That argument likewise was rejected, the Appellate Court saying:

* Sashihara v. State Board of Pharmacy, 46 Pac. (2nd) 804.

We are satisfied also that the object sought to be accomplished by the legislation in question is the protection of the public health, safety and general welfare, and that there is a reasonable relation between that object and the means adopted. This court cannot say that the classification excluding aliens is "palpably arbitrary." In the practice of pharmacy, chemicals and poisons are constantly used and compounded. If not handled with great caution, much harm might be inflicted. And it is obvious from these facts and others that there may be a reasonable basis for the existence of the discrimination against aliens, and therefore that the act under discussion is not an abuse of the police power. Neither do said sections deny to aliens the equal protection of the laws.

In connection with the foregoing case it is interesting to note the similarity between the statute under scrutiny, and the provisions of the New York Education Law regulating the practice of medicine. One of the provisions of section 1256 of that Law, which is the section regulating the admission of candidates for examination, requires that every candidate must submit under oath evidence that he is a citizen of the United States or has declared his intention of becoming such citizen.

Wrongful Death Action

A physician engaged in general practice, but doing considerable surgery, was called to the home of a boy of about 3½ years old, where he found the child suffering from a fever and cough and complaining of pain in the right shoulder.

He examined the child and concluded that he was suffering from bronchitis and possible fracture of the right clavicle, although there was no history of a fall causing such an injury. The doctor's impression was that there was some crepitus at the outer end of the right clavicle with dropping of the level of the right shoulder. There was, however, no swelling or redness in the region of the right shoulder at that time.

He examined the child's throat and ear drums and found them negative. He applied a sling for the right arm and prescribed a cough mixture. Examination of the child was difficult as he was not well developed mentally for his age and resisted the doctor's every effort to examine him.

The doctor kept in touch with the case for about a week by telephone, and apparently the child was getting along well. At the end of that time he called to see the child and found that the arm was still in the splint. The child continued to have fever but there was no evidence of infection.

Several days later the doctor again saw the child and there was no material change in his condition. A few days thereafter, another doctor was called in the case and he removed the child to a hospital where the first doctor saw him in consultation with other doctors.

While at the hospital, the child ran a very high temperature and died from a general streptococcus infection in about ten days.

An action was brought against the defendant by an administrator who was appointed for the child, in which the claim was made that the defendant doctor had negligently caused the death of the infant in failing to properly diagnose his condition.

Just as the case was about to be reached for trial the plaintiff's attorney, finding that he could obtain no offer of settlement from the doctor, consented to discontinue the action thereby acknowledging that he was unable to prove his cause of action.

Removal of Metallic Fragment from Finger

A young girl came to the office of a general practitioner and told him that she had broken off a piece of needle in her left index finger while operating a sewing machine. She had been referred to him for treatment by her employer. The doctor thereupon took an x-ray picture of the finger, and a foreign body approximately ¼" in length was shown near the tip of the terminal phalanx of the index finger. Adjacent thereto, and lying in the soft tissues, was shown a tiny particle of metal so small that it could scarcely be measured. The doctor made an incision in the finger and readily removed the larger particle. He decided against trying to find the tiny particle, believing that it would do no harm if it was permitted to remain where it was, and deciding that it would be extremely difficult to locate. He bandaged the finger and she remained under his care for several weeks for follow-up treatment.

The finger healed entirely, and at the end of that time she had full function and use of the finger and had no complaints.

It appears that about fourteen months later, she consulted another doctor who after taking X-ray pictures, found that the tiny particle was still in the end of the finger and that there was present a necrosis of the bone.

She was referred by said physician to a surgeon who performed two operations upon her, removing the tiny fragment and curetting the bone. It was the opinion of

the said surgeon that there was no connection between the bone injury and the tiny particle of metal which had remained all that time embedded in the soft tissues without causing any pain or suffering.

After the operations, the patient's finger apparently became stiffened and she instituted a malpractice action against the first doctor, charging that by reason of his failure to remove the tiny particle at the time he treated her, she had gone through a great deal of pain and suffering and had been obliged to undergo two operations and

had been caused to have a permanently stiffened finger.

The action came on for trial before a court and jury, and on the trial, two physicians testified that the defendant failed to follow proper and approved practice in his handling of the case. The surgeon who subsequently operated upon the finger, however, supported the defendant.

The issues were submitted to the jury and a verdict was rendered in favor of the defendant, thereby exonerating him of the charges of malpractice.

Across the Desk

THE TITLE OF DOCTOR," which ought to be a name of honor and distinction, has been so abused and abused by every kind of quack and charlatan that one thoughtful medical writer wonders if it is not time for the physicians to do something about it. True it is not possible legally to prevent a doctor of this or a doctor of that from hanging out a sign reading "Dr. John Doe." But something else is possible, and the Editor of the *Rhode Island Medical Journal* has a plan that is at least worth thinking about. He suggests that the real physicians, the true doctors of the healing art, drop the title Dr. from their office signs, and append only the degree M. D. If all physicians do this, the public will be quick to sense the fact that the latter sign proclaims the true man of medicine, and that the riff-raff, the rag-tag and bob-tail of muscle-thumpers and bone-wrenchers are sticking to Dr. because they have no M. D. to display.

It is unfortunate that our language has no other name that goes lightly and readily on the tongue for the man of healing. Germany has *Arzt* and France has *medecin*, but we stick to "doctor," which may mean anything from a theologian to a veterinarian. The word is about 600 years old, and was originally applied to the learned in general such as the early "fathers" of the Christian Church who were all doctors. Since then it has had some pretty rough usage and we even find a ship's cook commonly called doctor. The "doctor-fish" has a sharp spine on his tail, like a surgeon's lancet, which he uses with deadly skill, and the "blue doctor" is an angler's fly. A wide and varied circle to share the title! These and other interesting facts about the physician's cognomen were given in the inaugural address of President Her-

bert R. Hurter of the Liverpool Medical Institution, whose hobby is etymological research.

The medical practitioner was formerly known as a leech, but it happened that a blood sucking animal bore the same name, so the doctors gave it up. They have been called *medics*, *medicos*, *medicians*, *mediciners* and *medicners*, but, as Dr. Hurter slyly remarks, never *medici*. The word surgeon, too, is about six centuries old, and has been spelled in 30 different ways. That does not include its classical-sounding synonym *chirurgion*, either, which has had 15 different spellings. Any readers who wish to try to make 45 variations on these two words are at liberty to do so. And, after all, it seems that etymologically the word surgeon means simply a handy-man, so there is no need for any of that ilk to feel too high and mighty about it. Our language is ever shifting and changing, ever fluid, never at rest, and it may be that the time is come for the men of medicine to adopt some new title that will distinguish them from the swarm of imitators who curse our land like a plague. The field is open, and the cause is of the best.

MEDICAL MEN who have been visiting Europe are now back with interesting stories to tell, and it is our privilege to share in them. A Detroit doctor had the happy idea of interviewing the common people in various countries to see how they liked their national systems of medical care. He talked freely with the conductors and guards on the trains, the hotel porters, the clerks in the stores, the taxi drivers. He is Dr. Louis J. Gariepy of Detroit, Chairman of the Executive Committee of the

American College of Surgeons for the State of Michigan. To take one interview, he found the conductor and guard on an English train greatly pleased with their panel system. In fact, they had never known any other. Their panel doctor, they declared, was one of the finest in England. Efficient. He had some 2,000 patients on his list, and at his morning consultation he would see 30 of them in 30 minutes! Further questioning revealed the fact that very little examination of the patient took place, if any, and no laboratory tests at all were done. "In every case the patient entered the office with his own diagnosis and received the medicine that he himself prescribed or that was suggested from his description of his symptoms."

To the railroad men that looked like efficiency plus. It certainly was medical rail-roading. But two young surgeons at Saint Thomas Hospital did not share this admiration. They frankly called the panel system vicious. It gave them no incentive to progress, they said, and both were planning to enter the army or navy for their life work after finishing their hospital training. The English doctor gives the patient his bottle of medicine, instead of sending him to the chemist with a prescription, and a recent number of *Punch* pictures a doctor handing the medicine to a rather touseled patient, and asking: "Did the last bottle do you any good?" "Yus," replied the other, "I got sixpence on it." While that is merely humorous, of course, the cold fact is that sick-pay under every health insurance scheme is given on the findings of the panel doctor, and in England the period of hospitalization in surgical cases has doubled since the system was started. That costs millions of sixpences, and somebody has to pay for it. After looking into the medical plans in England, Belgium, Germany, Switzerland, and France, the Detroit doctor loyally comes home with the assertion that the Detroit plan is best, which at least ought to bring a round of applause when he tells the home medical society about his trip.

WEST VIRGINIA'S PRIDE is touched because a Kentucky health bulletin avers that social disease is brought into Kentucky border towns from West Virginia, thus seeming to cast a slight slur on the latter state, as it were. The state medical journal forgivingly says that "we are going to swallow our pride and overlook the incident for the sake of harmony," but it gets back at Kentucky with what is known as

a dirty dig when it remarks airily that "perhaps we have been guilty of carrying germs over the state line and leaving them in Kentucky, but Kentucky should remember that we have yet to complain when they carry Colonel's commissions over our state line and leave them in West Virginia."

A NEW ORGANIZATION in England is named the Smell Society. Part of its work will be to abolish unpleasant odors. Some months ago we suggested that our Anti-noise Society, in abolishing useless noises, should turn their attention to the young Ph.D.'s lecturing around the land in favor of state medicine. Since then all the state legislatures have adjourned without adopting a single one of the bills before them for compulsory health insurance and forcible regimentation of the physicians. This leaves the Ph.D.'s not only in the plight of being useless noises, but also in bad odor, and when the American branch of the Smell Society is organized, there is something ready for the disinfectant. .

THE DOCTOR has surprised everyone by the ready way in which he has turned his attention to economics and politics in the last year or two and has fought off the attacks of the socializers in the states and even in Washington. What other class can show such a clean-cut victory? And it started with almost no preparation, too. Very shortly the legislatures and the Congress will be meeting again, and this time the profession will be in battle array.

Just as an example, let us look at far-off McCook County, in South Dakota. Under the leadership of a physician and a dentist, there has been organized an Allied Professional Group, including all physicians, dentists, pharmacists, nurses, and even the veterinarians of the county. The aims; we are told "are frankly political." All the counties in South Dakota are to be similarly organized, and "political support of candidates will depend primarily upon the candidates' views upon matters affecting professional interests."

The influence of such an organization will be definitely in the public interest, for anything that harms the healing professions harms everybody. No one can assail the medical and health workers for organizing in their own defense. They have been driven to it, and the event will undoubtedly show that, like the Union Army at Gettysburg, they have been "hammered into an impregnable position."

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Commoner Diseases of the Skin. National Medical Monographs. By S. William Becker, M.D. Duodecimo of 283 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

The Medical Man and the Witch During the Renaissance. By Gregory Zilboorg, M.D. Third series, volume 2. Duodecimo of 215 pages, illustrated. Baltimore, The Johns Hopkins Press, 1935. Cloth, \$2.50.

1000 Questions and Answers on T. B. Edited by Fred H. Heise, M.D. Duodecimo of 232 pages. New York, Journal of the Outdoor Life, 1935. Cloth, \$75.

Abnormal Arterial Tension. By Edward J. Stieglitz, M.D. Duodecimo of 261 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

Recent Advances in Diseases of Children. By Wilfred J. Pearson, D.M., M. C. & W. G. Wyllie, M.D. Third edition. Duodecimo of 566 pages, illustrated. Philadelphia, P. Blakiston's Son & Co., 1935. Cloth, \$5.00.

Midwifery. Edited by Sir Comyns Berkeley, J. S. Fairbairn & Clifford White. Fifth edition. Octavo of 740 pages, illustrated.

New York, William Wood & Company, 1935. Cloth, \$6.00.

Obstetrics for the General Practitioner. By J. P. Greenhill, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 304 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

Industrial Medicine. By W. Irving Clark, M.D. & Philip Drinker, S.B. Edited by Morris Fishbein, M.D. Duodecimo of 262 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

The Management of Colitis. By J. Arnold Bagen, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 234 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

Diseases of the Chest. By J. Arthur Myers, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 385 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

Objective and Experimental Psychiatry. By D. Ewen Cameron, M.B. Octavo of 271 pages. New York, The Macmillan Company, 1935. Cloth, \$3.00.

REVIEWED

The Pocket Anatomy. By C. H. Fagge, M.B. Ninth Edition. 16mo. of 333 pages. Baltimore, William Wood & Company, 1933. Cloth, \$2.00.

This book, as its title suggests, is a pocket-size edition, containing 331 pages of anatomy with a complete index. The notable features in this new edition are that the author employs an approved English terminology and presents a comprehensive glossary of changes from the old terminology. The anatomy is presented in an orderly way with concise descriptions.

This book is highly recommended to the student as a complete outline of anatomy, for study and review, and for the practitioner and surgeon, as an aid in reviewing regional anatomy.

JACOB S. BEILY

X-Ray and Radium Injuries. Prevention and Treatment. By Hector A. Colwell, Ph.D., and Sidney Russ, D.Sc. Octavo of 212 pages, illustrated. New York, Oxford University Press, 1934.

This delightful little book is exactly as its title implies—a consideration of the prevention and treatment of x-ray and radium

injuries. It is quite fitting that the first chapter and also the appendix should deal with the matter of protection—protection to the operator and protection to the patient. These sections are especially valuable and had the early workers with the roentgen ray known how to have applied such protection to themselves there would not have been so many disasters.

Beginning with the superficial skin there is full consideration of the early and late changes, the result of irradiation and the care of radiodermatitis. Continuing, not only is the physiological action of irradiation upon various structures and organs of the body discussed but also the deleterious effects which may ensue are fully considered. The recent studies described in this book have caused many of us to change our views in that many structures, such as the heart, liver, and spleen, together with the muscles and nerve tissue, which were formerly considered to be practically immune to irradiation reaction are now shown to be definitely affected by them. It is of interest and importance to know that in treating about the mouth for such conditions as epithelioma, the reaction on the mucosa will be far

greater than that of the skin.

The whole book is a consideration of the physiological effect of x-ray upon the human organism together with the damage that may be produced and the best measures to offset or correct such damage when it has occurred.

Everyone attempting to use irradiation in any form should be thoroughly familiar with the contents of this little volume and it should prove a veritable Bible for him. Your reviewer feels that no one should attempt the use of irradiation in any form without a thorough familiarity with the contents of this book and it should always be within his reach for ready reference.

CHARLES EASTMAN

How to Practice Medicine. By Henry W. Kemp, M.D. Octavo of 158 pages. New York, Paul B. Hoeber, Inc., 1935. Cloth, \$2.50.

This work is intended for medical students and recent graduates. Undertaken after many years of experience in the general practice of medicine, the author gives advice to the young man based on his own seasoned experience.

A volume of this type would fill a useful place in the hospital library as well as in the recent graduate's office.

SAMUEL ZWERLING

Modern Operative Surgery. Edited by G. Grey Turner, F.A.C.S. Second Edition in two volumes. Octavo of 1760 pages, illustrated. Baltimore, William Wood & Co., 1934. Cloth, \$16.00.

This work appears in its second edition. There are a total of 1764 pages, 860 figures, and 11 plates. The binding is attractive and very well done. The paper is of good quality. The print is of necessity small in order to reduce the bulk of the book. It is very clear and easily read. There are 27 contributing authors, each representing his own particular specialty. The subject matter is so inclusive and comprehensive and the number of operations described so numerous that a detailed review is not possible. There is at least one operation for every conceivable surgical condition, including those on eye, ear, brain, plastic surgery, orthopedics, nerves, and so on. In brief, the entire range of modern surgical operations is most carefully and completely surveyed. Only the operations that have proved their value are described. Symptomatology and diagnosis are not discussed. However, the reason for the choice of each operation is given as well as the preparation of the patient, after-treatment, and the difficulties and dangers arising during and after the

operation. The general plan of this edition is the same as the first. New chapters on Radium and Surgery of the Sympathetic Nervous System have been added. All other chapters have been rewritten where operative progress has in any material way made them obsolete since the first printing. For instance, the surgery of varicose veins has been replaced by a description of the injection method. The abdominoperineal excision of the rectum was rewritten by Ernest Miles and brought up to date in every detail.

For a ready and complete reference work on operative surgery, the reviewer recommends this most highly not only to the recent medical graduate but to the active general surgeon as well.

MERRILL N. F. FOOTE

Franklin Paine Mall. The story of a Mind. By Florence Rena Sabin. Octavo of 342 pages, illustrated. Baltimore, Johns Hopkins Press, 1934. Cloth, \$2.75.

Dr. Florence Sabin has written an exceedingly interesting biography of Dr. Mall. Starting with a description of his early childhood on a farm in Belle Plaine, Iowa, the book advances by easy stages to his schooling in a local academy, his later studies in the University of Michigan and his postgraduate work in Leipzig, Germany. It was the influence of a local schoolteacher, a John McCarthy, that revealed the pleasure of study to the youth and launched him on a straight course to a thorough education. In Leipzig, Dr. Mall came under the guiding spirits of Drs. William His and Carl Ludwig, who opened his eyes to the possibilities of original work in the sciences of anatomy and physiology. Dr. Mall's profound reverence and love for Professor Ludwig is tenderly and affectionately expressed in his letters to the latter.

Franklin Paine Mall is little known to the rank and file of the medical profession, and much less known to the general public. Dr. Sabin was one of his pupils and his co-worker for twenty years. The author was very fortunate to come in close contact with the man, for she was able to study at close range his influence upon medical science and education in America. It was through his efforts that the inductive method of teaching was inaugurated in Johns Hopkins and later adopted by all the other medical institutions in this country.

This book, as a whole, can be given the highest praise. It should prove of especial interest to graduates of Johns Hopkins University.

WILLIAM RACHLIN

Symposium on Surgery of the Chest

ACUTE EMPYEMA OF THE PLEURA

HOWARD LILIENTHAL, M.D., F.A.C.S., *New York City*

Surgeons who do most of their work in diseases of the chest—thoracic surgeons—know much about empyema of the pleura; about its various causes, anatomical forms, clinical course, and its treatment by minor procedures or by major operations. To them empyema is nearly always regarded as a complication of some disease, either thoracic or remote. To them, also, it has always a serious aspect; one which is fraught with danger either remote or of startling and dramatic suddenness. But the great mass of our profession regards it as something that can be treated by standardized methods and the possibility of its dangerous complications is seldom considered or realized.

This is written for the information of those who do not confine their work to surgery of the chest. Practitioners of internal medicine may gain some new information and perhaps even a few of the general surgeons will get a new point of view.

Definition

According to Wilensky¹ we may regard all cases in which there is pus in any part of the pleural sac as empyema no matter what its direct or remote cause may be. Anatomically we speak of general, or of sacculated varieties, large or small, and these descriptive terms may also take in the sacculations according to their more exact location. For example, we have the mesial empyema which lies to the central

side of the lung, and the supraphrenic—which should be called hyperphrenic according to proper etymology. Sacculated empyema need not consist of a single collection of pus; there may be multiple empyemas and, indeed, I have found five distinct sacs during one operation with pure cultures of three different organisms.

Interlobar empyema is described by its title.

But if I am not to exceed the time allotted to me it is quite impossible to enter upon descriptive details. It is enough that I have called your attention to the various anatomical forms and I hope that I may have aroused interest enough to stimulate the investigational curiosity of some of my hearers.

Causes

The most direct cause of empyema is trauma from outside the body, such as a gunshot wound or a stab wound of the chest with or without injury to the lung but with implantation of pathogenic organisms. I shall not discuss this form of empyema.

The most frequent immediate cause of pleural suppurations is infection from the lung through a cortical abscess. This abscess is usually of inconsiderable size and often is unrecognized; or it may be metastatic from a distant focus. As an example I remember a case in which following a phlegmon of the arm there were blood-borne foci in the kidneys and

Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 15, 1935

in both lungs. The focus in the right lung infected the pleura with a resulting large empyema. Within the other lung a closed abscess developed and was finally drained by operation without the production of pleural suppuration.

We may mention in passing another but less usual cause. I refer to the general infection of the serous membranes; e.g., in certain empyemas of influenza or of exanthematous diseases. I need not enumerate them.

Organisms

Infecting organisms are many. One of the commonest is the pneumococcus group of which there are numerous varieties. Empyema of this type is generally more easily treated than that produced by the streptococcus or the staphylococcus. Neuhof and Berck² have described most convincingly certain characteristics of staphylococcus empyema, with suggestions for its treatment. I have found that a streptococcus empyema must be regarded with profound surgical respect. The disease has a strong tendency to spread to other parts of the pleura either connected or not with the original focus and it also has a habit of recurring months or even years after the apparent healing of the operative wound. The streptococcus, too, has a way of invading neighboring structures and cavities such as the pericardium. There are cases in which an empyema, streptococcus or not, appears to invade the lung itself with resulting secondary abscess which may even enter a bronchus.

Bronchoscopy

This procedure is of great diagnostic and often of therapeutic value. It should be employed in every case of atypical disease of the pleura or of the respiratory tract. While it is seldom accompanied by actual pain the patient or, more often, the physician, is apprehensive and this attitude must be overcome by assurance that the knowledge gained through the endoscope may completely change the character of the contemplated operation or may even prove that no major surgical procedure is required. Unless the origin and distribution of the empyema are obvious, bronchoscopy should not be omitted.

Roentgenography

It is not fair to attempt to treat empyema, except in dire emergency, without having gained knowledge as exact as possible of the physical conditions with which we are dealing and we have nothing to aid us in this which compares in value with x-ray study. The usual x-ray picture (not fluoroscopy except in the hands of the elect) will give us information from which the proper surgical procedure may be selected.

There is no time here for a dissertation upon this subject but, speaking generally, we may determine the location of pockets or the presence or absence of gas.

Operative Treatment

If there is a history pointing to empyema and we are called to see a patient whose mediastinum is strongly deviated and who is cyanosed and gasping for breath it is obvious that some immediate action is necessary. This should be of the emergency type and should not be regarded as final even though it may occasionally result in complete cure. We have little or no time here for x-ray study, nor would it be of any particular value. The tension within the chest must be released and this, as is known, can be quickly accomplished by making a very minute intercostal incision through the skin and inserting a large needle into that intercostal space which seems farthest away from internal thoracic organs. A large tense empyema will usually push the lung and mediastinum so far away that danger to these regions need rarely be considered.* All the accidents from the mere insertion of a needle into an empyematous chest need not be enumerated but I will mention a few of the more obvious ones. The occurrence of mixed infection from the skin can be minimized by making a tiny incision as far as the subcutaneous tissues and inserting the needle through this opening. I prefer not to apply local anesthetics by injection but to benumb the skin either with one of the freezing vapors or even by applying a piece of ice through a covering of sterile rubber dam. The latter method is preferable in children.

* This refers only to acute cases.

because they are frightened by the sudden impact of the freezing spray. After the skin has been deadened and the tiny incision has been made it may be desirable to enlarge the opening. Efficient local anesthesia can then be secured by means of endermic injection, the needlepoint entering the skin by way of the minute incision without passing through the possibly contaminated cuticle. I usually select a rather large exploring needle for the thoracic puncture and in order that it may enter smoothly I lubricate it with a little 1 per cent or 2 per cent lysol.

Another danger to the chest wall is that of implantation of malignant anaerobes in the deep layers during the withdrawal of the needle. When this occurs it may be several days before the diagnosis of a phlegmon is made. Such infections put the patient in mortal danger and are far more frequent than is popularly supposed. A good way to prevent this accident is to inject a few drops of alcohol through the needle as it is withdrawn.

In these cases of acute tense pyothorax or pyopneumothorax the fluid should be permitted to escape without suction. There will be some entrance of air until normal pressure instead of positive or negative tension has been attained. While suction tends to correct mediastinal deviation it is always accompanied by the danger of too sudden correction of the displaced heart and great vessels, with the occasional dislodgement of a blood clot into the circulation with its consequent embolism. There is also a tendency to distend the lung so that it may be pricked by the needle point. Indeed, if strong suction is to be carried out one might better employ the tiny trocar and cannula which comes with the equipment of the Potam set. Then the lung will probably not be wounded even though it touches the cannula. An immediate examination for organisms by staining an ordinary smear will in the majority of instances furnish a provisional diagnosis. This may be of special importance if streptococcus or staphylococcus is found. Besides this if the pus is foul we may regard the case as anaerobic† and we should look for evidences of lung abscess. This means

not only physical examination but roentgenological observation as well. For the latter it is advisable to make x-ray exposures in at least two directions, first, anteroposterior or posteroanterior with the patient upright, and, second, the same direction of exposure with the patient lying on his well side. Fluid levels will nearly always demonstrate the size and form of the cavity and even the presence of more than a single chamber.

Fluid without visible levels, such as usually occurs before aspiration, is not always easy to recognize with the x-ray and may require the experienced eye of a professional roentgenologist.

When a fluid level is seen before any evacuation, either by aspiration or otherwise, one must conclude that there is either an opening into a lung abscess connected with a bronchus or that we are dealing with infection by gas-producing germs.

Certain cases of empyema not connected with a lung abscess by a large opening will occasionally recover following emptying with a needle. This is unusual but should be remembered so that in the least virulent forms operation may not be performed too soon after relief by the puncture method. Delay and even other punctures may at times be desirable. For example, in double empyema one would operate upon the side more seriously affected, and be content with a series of punctures of the other side until the patient's condition is good enough to permit bilateral drainage.

Open Operations

First we have intercostal drainage with a tube and valve. My preference after many years of experience is for an intercostal incision through the skin, then an opening with dissecting scissors into the pleural sac, taking care to keep as close as possible to the margin of the rib below. A soft gum tube just rigid enough to hold its lumen patent is the kind preferred. I do not countenance the use of the usual red rubber tube because it is nearly always hard in texture and its inner end may easily erode the lung or even the pericardium. This is particularly true in empyema accompanied by blood infection or resulting therefrom.

Drainage at the lowermost part of the

† There are also anaerobes which do not produce fetid gas.

chest, anatomically speaking, is neither necessary nor always advisable, because the diaphragm continues to rise with the formation of a long tract between the outside world and the collection of pus.

The suction which I employ is not the usual underwater type. Instead of this I use an extremely soft pliable finger cot, not a glove finger, which is fastened to the tube with a ligature. The end is slit so that with every cough abnormal pleural contents are forced out while with inspiration the finger cot blocks the tube. Should it be ascertained that we are dealing with an empyema secondary to lung abscess with bronchial connection this valve drainage will still function provided the caliber of the tube is larger than that of the opening in the bronchus. It is best to have the external part of the tube long enough to permit the finger cot to lie loosely in a bottle or other receptacle, and there must be a free space between the neck of the bottle and the tube. The finger cot should never be covered by a gauze dressing no matter how loosely because this impedes valve drainage. The lung expansion in these cases is amazing even though the valve does not work steadily or forcibly and when nothing is left but a narrow tract one may remove the tube and inject through a *much smaller tube* some antiseptic substance such as the irradiated petrolatum of Eising (Radolatum Squibb) or, especially in the tuberculous cases, 30 per cent iodoform in aquaphor (an animal substance and presumably absorbable). The Radolatum I have found of great value in producing closure of sinuses which have been discharging for many months. In inserting any substance, fluid or otherwise, through a sinus one must be absolutely certain that there is perfectly free egress of air alongside the tube otherwise the danger of air embolism is very great. As an added precaution these injections should be made with the patient's head distinctly lower than his chest.*

Drainage by a valve formed by a flap of skin with a short tube entering the chest beneath has been recommended and is worth considering in certain cases. An excellent paper on this subject by Dr. Alexander Nicoll³ of New York is well

illustrated and the physiological explanation is clear and accurate. It is applicable when the empyema occupies the greater part of the chest and there are no sacculations. I have never employed the method because the one just described by me seems simpler and more direct and if further procedures should be necessary they may be carried out by lengthening the original incision without the complication which the presence of a skin flap would entail.

Another word about drainage tubes. Deliberately repeating what I have many times emphasized let me insist that the intrathoracic part of a drainage tube must have numerous openings and that the most superficial of the openings should be close to the inner part of the chest wall. The frequency with which this simple rule is disregarded is almost inconceivable. Scarcely a month passes that I do not see a patient with a tube, the openings of which are far from the chest wall so that there is no actual drainage until the fluid has mounted almost or quite to the inner end of the tube. Merely replacing these tubes with multifenestrated ones has in a number of cases resulted in recovery without any secondary operation.

There is one other precaution; viz., be sure to use a tube of small enough caliber to prevent erosion of the edge of the next rib above. Serious or even fatal hemorrhages have occurred from an intercostal artery whose walls were eroded by a drainage tube.

If at the end of four or five days there are still signs of sepsis or if there is irritating cough another x-ray examination should be made immediately in search of secondary pockets. When these are found the case must be treated by wide intercostal incision or by resection of enough ribs to permit manual exploration of the chest with breaking down of adhesions, converting a loculated empyema into a single one. In considering the question of drainage in these cases I am convinced that a light packing of gauze into the entire sac even though this may be very capacious is of great value. The systematic application of this method was advocated by the late Dr. John F. Connors and Sauerbruch, in the 1925 edition of his book, describes a

* The valve drain permits ambulant treatment.

similar treatment* In from two to four days the gauze is removed and the amount of discharge will be found far less than one would have imagined. The lung can then be made to expand nicely by coughing which produces much more expansion than the usual blowing of bottles. In little children a pinch of snuff will cause sneezing when they cannot be made to understand the value of voluntary coughing.

Operative Therapy of Mesial and Supraphrenic Empyema

When a sacculation of pus is suspected just above the diaphragm it is essential to peel away the lower lobe from the dome of this muscle and even though pus is found here as a distinct sac it is best, so long as we are after all exploring, to break down mesial adhesions with the possibility of finding another sac or even an extension of the same one against the mediastinum, more often noted in chronic than in acute empyema. In any event one must be sure that the lung is free so that when the patient coughs or when the anesthetist creates hyperpressure, expansion may be unimpeded. In exploring the chest the possibility of interlobar effusions must be borne in mind and the lobes carefully separated.

Occasionally sacculations may require drainage through separate incisions. This is especially true in more malignant forms of infection such as those of hemolytic streptococcus for here the wide intercostal incision with consequent large denuded areas may invite fresh invasion, a small secondary incision is then best. In nearly all other infections this danger need hardly be considered.

Prognosis After Operation

The danger of a fatal termination in empyema is underestimated by the majority of physicians. Taken as a whole in adults and children anything better than 10 per cent may be considered statistically excellent. This includes those patients discharged from the hospital with a sinus who not infrequently require dangerous secondary surgical procedures for com-

plete restoration to health. Death after one of these operations must be ascribed essentially to empyema and not to the secondary operation because without this the patient would not be restored to health and the dangers of hemorrhage, cerebral complications, and amyloidosis would still be present—to mention only three of them.

No matter what the original cause of empyema may have been local recurrence may appear months or even years after operation, especially when the streptococcus was the invading organism. And here again, speaking of mortality, we must count in our list deaths following any operation for the cure of the empyema. This may be compared to the many "cured without surgery" cases of appendicitis with death following operation for a dangerous recurrence.

Let me give you an example. A man in his early forties had a left-sided empyema following pneumonia. He was operated upon in 1929 with apparent recovery. Three years later there was a recurrence from which he recovered in about five weeks after a second thoracotomy. He remained well for nearly three more years when the disease reappeared as a localized empyema. About five ounces of pus were removed now by incision and the left lung was freed from its tough and leather like pleural exudate so that its movements were unimpeded. The wound was to be treated open and a light packing was put in as a last step of the operation. The patient immediately expired. This case might have been twice counted among the so called cures.

How long we should wait before pronouncing one of these patients perfectly well it is impossible to say but one should be very cautious in assuming that any case of empyema is permanently cured. In the event of any subsequent inflammatory disease the chest should be examined by x-ray in order to exclude the presence of reactivated pleural infection.

Another complication of empyema which is very frequently found, especially in postponed operations, is the deformity of the ribs to which Bisgard⁴ has called special attention. He has found that in a comparatively short time, sometimes amounting only to days after the onset

*I have packed sacculated empyemas for many years, but have not recommended it as a standard procedure.

of empyema, the rib sections become distorted so that we have triangular instead of the usual flat costal sections. There is also a drawing-together of the intercostal spaces on the diseased side with corresponding spinal curvature to the opposite side or sometimes even to the same side.

The subsequent deformity or scoliosis may be very severe. Especially in children is this untoward effect to be guarded against even though they have made an apparently perfect recovery with a symmetrical figure. Later on in life the scoliosis may be responsible for a painful intercostal neuritis. The complication of this deformity should be kept in mind and the patient consistently observed and treated, if necessary, by orthopedic measures. One of the worst cases of this deformity which I have ever encountered appeared after a mere intercostal incision with rapid recovery in a baby less than a year old. I did not see the child again until she was eight and I was shocked to observe the ugly distortion, a direct result of negligence.

Pericarditis

Suppurative pericarditis is a complication of empyema, usually a fatal one, which is too infrequently diagnosed. We should have this disease in mind whenever the empyema itself does not account for the untoward symptoms. On March 10, 1935, at Mount Sinai Hospital at the Pathological Conference a case was reported in which postmortem examination had revealed the cause of death—suppurative pericarditis—when the x-ray pictures could not have been interpreted as

indicating the presence of pericardial effusion. The patient was a child and the empyema was a left-sided one.

In operating for suppurative pericarditis the great danger is wounding the pleura. When empyema is present the approach should be from the *empyematous side*, but extrapleurally, instead of from the opposite side regardless whether the right or left pleura was the seat of suppuration. I shall not discuss the technic of pericardiotomy here, though I wish to stress the fact that suppurative disease of the pericardium treated without operation is almost uniformly fatal.

Summary

(1) The object of this treatise is to stress the necessity for a working knowledge of acute empyema to both medical practitioner and general surgeon.

(2) A discussion of the causes of the disease and its gross anatomy.

(3) The importance of bronchoscopy.

(4) Roentgenography.

(5) Operative treatment according to cause and distribution.

(6) Discussion of drainage.

(7) Pericarditis as a complication.

(8) Prognosis.

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References

1. Wilensky, A. O.: *Surg., Gynec., and Obstet.*, May and June, 1915.
2. Neuhof, Harold and Berck, Maurice: *Archives of Surgery*, March, 1935.
3. Nicoll, Alexander: *Surg., Gynec., and Obstet.*, 53:206, 1934.
4. Bisgard, J. Dewey: *Arch. of Surgery*, 29, 1934.

NON-TUBERCULOUS PULMONARY SUPPURATION

CARL EGGERS, M.D., *New York City*

A study of non-tuberculous intrapulmonary suppuration shows that this condition is compatible with life, even for many years. How uncomfortable the patient will be or to what degree he will be disabled depends on his place of residence and mode of living, on the extent of involvement, the amount and odor of sputum, whether there is free communication with the bronchial tree or not, and on the condition of other organs. Patients who live an outdoor life are likely not to

feel the ill effects as much as those living in close quarters in the city, and they are not so likely to be obnoxious to their surroundings. They eventually succumb to their affliction, whether the immediate cause is directly traceable to the local lesion, such as hemorrhage, or extension of the process in the form of a bronchopneumonia or multiple abscesses, or to a pulmonary embolus; or to the degenerative effect of long-continued suppuration on other organs with general exhaustion,

or finally to distant complications such as brain abscess, meningitis, or liver abscess.

Every attempt should be made to cure patients in order to protect them against such a dreary outlook. It has been shown that unless conservative measures bring results in acute cases in a reasonable time, some more radical procedure or operative treatment is advisable. In chronic cases drainage is indicated in those patients in whom a cavity can be demonstrated, but in the other patients one is forced to the conclusion that operative intervention which aims at the actual destruction of the involved lung tissue, or removal of the lobe, is the only means to bring permanent cure.

For purposes of study and treatment it is practical to classify patients into groups, dividing them into acute and chronic cases, by bearing in mind that though they may differ as to etiology and early pathology, they may become more nearly alike as the process continues.

In addition to the consideration of the time element, however, it is believed that division into the following three main groups, is of value.

1 *Suppurations Limited to or Originating in the Bronchial Tree, Known as Bronchiectasis.* From the nature of the condition it is apparent that aspiration of foreign substances, infected or otherwise, is the probable etiological factor. The process may start insidiously or more acutely. At times the inflammation is confined to one lobe, or a portion of it, and remains there, at other times a gradual extension to other lobes can be made out until the process is bilateral in character. The lower lobes are affected more often than the upper. While in the beginning the inflammation is no doubt limited to the mucous membrane, leading to thickening and profuse exudation, it later spreads to the surrounding tissue and produces a pneumonitis and finally fibrosis. In those cases of aspiration in which putrefactive and pus producing organisms play a role, a destructive process may start early, leading to a rapidly spreading gangrenous abscess. In the less severe cases the walls of affected bronchi may become weakened, leading to a slow perforation with gradually developing secondary abscess, a so called bronchiectatic abscess.

2 *Suppurations of the Lung Parenchyma Outside the Bronchial Tree, Commonly Known as Lung Abscess.* They are less common than those of the first group. They may start in a pneumonic focus with breaking down of tissue and liquefaction. Much depends on the organisms involved. It is probable that pure pneumococcus infections infrequently lead to abscess formation. The latter is more common in broncho pneumonias of streptococcus or staphylococcus origin and where pus-producing organisms act as secondary invaders. Another common cause of these abscesses are septic emboli carried to the lungs through the pulmonary circulation. Another possible cause is an aseptic infarct which secondarily becomes infected. One also constantly has to bear in mind the possibility of a malignant tumor with breaking down and secondary infection, especially in older subjects. In case the infection is of low virulence, the abscess may become well encapsulated and pass into the chronic stage. Coincident with this development the walls become hard and sclerosed and eventually the entire process may resemble a bronchiectatic abscess. In the more virulent infections, on the other hand, the abscess steadily increases in size, there is destruction of tissue, possibly with gangrene. Eventually it may perforate into a large bronchus or the pleura.

3 *Massive Gangrene of the Lung.* This classification is reserved for those cases in which a portion of a lobe or an entire lobe becomes gangrenous and is extruded. It is due to blocking of a blood-vessel by a septic embolus or thrombus with massive destruction of the involved tissue. A secondary exudate will develop around this necrotic mass of lung and the clinical picture presented is that of an empyema, perhaps with signs and symptoms suggestive of an intrapulmonary lesion. The condition is not common, at any rate it is not often diagnosed.

What becomes of all these acute intrapulmonary suppurations if left untreated or if treated by medical, so called expectant treatment? One of several courses may be followed. (1) Some of the very septic cases, with high fever and prostration, run a rapid course and end fatally. They are nearly always associated with

spreading gangrenous inflammation, (2) A certain number of the milder forms heal spontaneously. In some of these the true pathology may not have been recognized. They may have been diagnosed as pneumonia with delayed resolution, chronic pneumonia, or putrid bronchitis. However, there are also real lung abscesses or early bronchiectasis cases, recognized as such, which go on to complete cure. (3) Some abscesses perforate into the pleura. This is not an infrequent occurrence with those situated near the periphery. If the perforation is small, a slow leak results with a well encapsulated pocket of pus. In case it is larger, a regular empyema forms, which sinks to the lower part of the pleural cavity. Sometimes a sudden perforation takes place, especially during a coughing effort, resulting in an acute pyopneumothorax, or a perforation into the pleura and bronchus may take place at the same time. (4) The suppurative process may gradually pass over into the chronic stage. In case it is limited to the bronchi, bronchiectasis results. If on the other hand, the inflammation is situated in the parenchyma, it may spread and gradually involve more and more tissue, or it may encapsulate and become quiescent with occasional flareup.

At any time during this acute period, danger threatens the patient. How great the danger is depends on various factors, whether the infection is limited to the bronchial tree, or whether it is spreading in the lung parenchyma, also on the virulence of the organism and the resistance of the patient, whether the supuration is near the hilus or near the surface of the lung, and whether blood-vessels are involved in the process. A complication may develop unexpectedly and interrupt what seemed to be a satisfactory convalescence. A sudden pyopneumothorax may terminate fatally, there may be a severe hemorrhage, a focus of secondary pneumonia may develop, pulmonary embolism may result, or infection may be carried by a pulmonary vein to the heart and through it into the systemic circulation to form a brain abscess or other secondary focus.

It is apparent therefore that alert watchfulness is in order, and that intervention may become necessary at any time. As long as convalescence is satisfactory, and

there is slight steady improvement, one should carry a patient along until cure results or to a stage when the acute symptoms have been overcome and the danger of spreading sepsis reduced. Such conservative treatment may be materially enhanced by postural drainage, perhaps a transfusion and at times a salvarsan injection.

If in spite of these measures no improvement takes place, or the condition tends to gradually get worse, some form of more active interference has to be considered. This applies alike to the rather acute cases which remain stationary, and to those patients who come under observation after they have reached the chronic stage.

As there is considerable difference in cases with lung suppuration, it is well to consider the more active treatment under the headings of three large groups mentioned above.

Treatment of Bronchiectasis. Much depends on whether the case is seen early or late, whether it is limited to one lobe or bilateral in extent, and whether it is still confined to the bronchi. In those cases in which the infection is limited to the bronchial tree, with small cavities due to dilatation of some of the bronchi, and regardless of whether the surrounding lung parenchyma is infiltrated and fibrosed or not, the object to be achieved naturally is to try and favor drainage by way of the bronchi. Postural treatment is of great help, as all the infected bronchi communicate with the larger trunks. Inhalations to help fluidify the secretion and make it less odorous are of value. This treatment may be supplemented by bronchoscopic therapy. By dilating strictures, cauterizing granulations, and sucking out tenacious secretion one may open up paths for better drainage. It is also possible to inject antiseptic or astringent solutions to favor healing. In the very early cases one may even remove the offending infectious agent which has gained entrance by aspiration, and thus abort the process. Bronchoscopic studies after mouth operations have shown that in many cases blood and secretion is found in the tracheobronchial tree and that apparently it is not the aspiration as such which does harm, but the fact that it cannot be expelled in certain patients, owing to some impair-

ment of the expulsive mechanism. If this is conceded to be true, it is evident that early bronchoscopy aimed at the removal of such aspirated potentially infective material, should cure these cases.

It is known that bronchiectasis is at first often a localized lesion, and that later one bronchus after another becomes infected, until an entire lung or both sides are involved. It is very desirable therefore to utilize all means to combat the disease in this early stage, and there is at present no method equal to or superior to bronchoscopy.

If these measures fail, artificial pneumothorax may be tried alone, or in conjunction with bronchoscopy. If we consider that one of the reasons for failure is the inability of the lung to collapse and empty itself owing to the negative pressure in the pleural cavity, it is conceivable that compression or collapse will favor drainage via the bronchial tree. This method has been tried by a number of authors, and it is felt that at times it may be of help. Like every other method of treatment, it is probably of real value only in the suitable case. It should be used especially in early cases in whom no serious structural changes have taken place in the bronchi. It seems logical that the requirements for success would have to be a free communication with the bronchial tree, that there should be no pleural adhesions, and that the lung tissue surrounding the infected bronchi must be resilient, soft and collapsible. In cases with marked infiltration of the lung parenchyma, sometimes called suppurative pneumonitis, which is incapable of compression or collapse, the treatment will naturally be of little value. The same applies to old chronic cases with fibrosis.

If no result is obtained, other means to bring about compression of the lung may be resorted to. Crushing of a phrenic nerve may be performed, or finally some form of surgical collapse, so called extrapleural thoracoplasty. The extent of this would have to depend on the extent of the intrapulmonary lesion. This operation is usually applied in the more chronic cases with extensive unilateral involvement. It does not cure, and some authors have little faith in it, but it sometimes brings about amelioration of symptoms. In patients with profuse foul smelling

sputum relief is sometimes obtained by the use of x-ray treatments.

If all these measures fail, is there anything left to do, or should anything else be done? Much depends on the condition of the patient. If he has been improved considerably by bronchoscopic treatment or a collapse operation, if the amount of sputum has been diminished and is non-odorous, the best advice is to be satisfied. If on the other hand there has been no improvement, if the sputum is copious and of a disagreeable odor, making the patient's life miserable and him practically an outcast, some more radical step may be proposed, either a direct approach to the suppurative focus or a lobectomy. The cases in which these operations are indicated are naturally those with a unilateral lesion and preferably those with involvement of only one lobe.

By direct approach is meant an operation via the thoracic parietes directly into the suppurating lobe. In true bronchiectasis, as we consider it today, a drainage operation would seem to be of little value, because not all infected bronchi can be reached. In actual practice, however, it has been found that a bronchial or pulmonary fistula established in the center of the lesion may by external drainage and aeration do away with the odor and improve the general well-being to such a degree as to almost amount to a cure.

If more radical treatment is indicated one may use the so-called "Cautery Pneumectomy," which consists of the gradual destruction of the affected lung tissue with the cautery. The method has not become popular because the extent of destruction is not definitely under control and because of the frequency of secondary hemorrhages. In some cases, striking results are obtained.

The actual removal of the affected lobe or the entire lung by means of surgical excision is becoming more popular. For years this has been recognized as the ideal procedure in rebellious cases, but its application was retarded by the high mortality. Several methods have now been developed to insure greater safety, either by the one or multiple stage procedure, and it seems that this will become the method of choice.

Treatment of Lung Abscess. In cases of bronchiectasis in which the infection has not remained confined within the dilated and sacculated bronchi, but has broken through and invaded the surrounding lung parenchyma in one or more places, bronchiectatic abscesses result. Such perforations may result early and lead to rapidly spreading gangrenous abscesses, especially in those aspiration cases in which putrefactive and pus-producing organisms have entered. As a matter of fact, the bronchiectasis has hardly time to develop before perforation takes place. In other cases the infection remains confined within the bronchi for some time, and then a slow perforation takes place and gives rise to a gradually developing abscess. Both these types should then no longer be classed with bronchiectasis, but with the lung abscesses produced in other ways. They should, however, be given the benefit of conservative treatment and bronchoscopic therapy, for it is particularly in this group of acute postoperative abscesses that spontaneous cures are reported.

In a general way it may be said that the acute type of these abscesses with rapidly progressing destruction of lung parenchyma and liquefaction belong in the same class as acute lung abscesses following pneumonia or embolism, and require the same treatment. Lung abscess proper, meaning by that a collection of pus in the lung parenchyma, originating in either of the ways mentioned above, is a truly surgical condition, and drainage alone will bring about a cure, either by way of the bronchial tree or through the chest wall. Nature may bring about such drainage by perforation into a bronchus or into the pleura, and thus lead to a cure. If it does not, it is up to the surgeon to establish drainage.

At what time in the course of the disease should he intervene? That is a question not easy to answer. I think all thoracic surgeons are agreed that the earliest time consistent with safety is the best time, as it is most likely to lead to complete restitution to normal. Operations done very early during the acutely septic stage of the disease have a very high mortality and should be avoided. Then also one should give nature a chance. If we consider the pathological

process within the lung to be a gradually progressing destructive one, it is possible to conceive of the process reaching either a large bronchus or the pleura and producing there adhesions to the parietal pleura which makes operations much safer, or an empyema, which, according to reported statistics, leads to a high percentage of cures. Just how long one should wait has to be judged in the individual case. The majority of authors seem to feel that if no improvement or cure has resulted in two or three months, operation should be considered. If at any time during this period the condition gets worse, or the indications are clear-cut, operation should be done earlier. No definite rules can be laid down, but it may be said that it is wise not to let a patient get into the chronic stage, because in this period many more complications threaten and a restitution to normal, even after operation, is longer drawn out and often impossible.

In those patients in whom the lung has become adherent, and in whom local signs can be elicited on physical examination the entire operative procedure may be carried out in one stage. It is best to resect a piece of one or two ribs, and after making sure of the location by an exploratory puncture, go right in alongside the needle. By means of a finger, the opening may be enlarged and all the necrotic material and pus evacuated. If there is much bleeding a tampon should be packed into the cavity, otherwise a soft rubber tube or rubber dam should be inserted. In the more acute cases, those operated on within a few months after onset, one finds an irregular ill-defined cavity, with strands or septa running through it. The amount of pus and necrotic material found in these cases indicates that no free bronchial communication ever existed, at least not of a size sufficient to carry out this material and shows the futility of conservative treatment in such cases. In case the lung has not become adherent, but the location of the abscess is superficial and has been definitely localized, a circular suture approximating the two pleural layers may be done, and a tampon then lightly packed into the wound for several days, when an opening is made into the abscess within the limits of the circular suture. Instead

of a suture, one may simply pack gauze against the pleura, which will favor formation of adhesions. More difficulty is experienced in those patients in whom no adhesions have formed. The abscess is usually situated deeply, and not easy to localize. It is necessary to open the thorax, palpate the lung, and after finding the infiltrated area, suture the overlying visceral pleura to the parietal one. It is important to choose the proper place for the incision, so that the abscess comes to lie directly underneath. The procedure carries with it more danger than in the other cases and usually has to be performed under general anaesthesia.

In the chronic lung abscesses the danger of sepsis is usually less, while hemorrhage assumes a more important role. The surrounding lung tissue is firm and sclerosed, and has lost its elasticity, the bronchi are dilated, rigid and infected, and the blood vessels friable. There is usually a well-defined fluid level. The lung may be adherent or not. On this largely depends whether the operation should be done in one or two stages. The condition of the patients also has to be considered in deciding the question, for they usually cannot stand very much and care must be taken not to overtax their strength. For this reason alone a two stage operation offers advantages.

While in the more acute cases healing usually takes place fairly early after operation, it is often long drawn out in the chronic cases, and a bronchial or pulmonary fistula has to be maintained for a long time, or even permanently. One reason for this is that old cavities become lined with epithelium which is continuous

with that of the bronchi and prevents obliteration. Another reason for delayed healing is found in the lung tissue surrounding the old abscess cavity, which is infected and contains numerous little recesses filled with material which keeps up a mild suppurative process. The fistula thus acts as a permanent safety valve. Although not ideal, the results of drainage in these old cases are nevertheless so gratifying that the little discomfort is fully compensated for. Lobectomy would be the operation of choice were it not for the high mortality.

After the fistula has existed for months or years, and no longer discharges pus, but simply a little mucus, and the x-ray shows a clear field, one may consider that it has fulfilled its purpose and allow it to close spontaneously, which in many instances it will do as soon as the tube is removed. In some cases, however, there are definite obstacles to closure and one has to operate.

Treatment of Massive Gangrene of the Lung. Knowledge of the pathology, suggests the treatment of this condition, which is thoracotomy with removal of the necrotic mass. Unfortunately the diagnosis cannot be made unless one operates. The clinical picture is that of an empyema, and at operation for this condition the demarcated lobe, or portion of lobe, is accidentally discovered. This is perhaps an argument in favor of making empyema incisions sufficiently large to be able to look in. The prognosis is not necessarily bad, especially if operation is done fairly early and if the amount of lung tissue involved is not large.

850 PARK AVENUE

THE DIAGNOSIS AND SURGICAL TREATMENT OF ANTERIOR AND POSTERIOR MEDIASTINAL TUMORS

Report of a Case of Posterior Mediastinal Tumor

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Increased interest in the surgical treatment of mediastinal growths has been shown in recent years because marked advancement in methods of diagnosis of thoracic diseases has made possible their early recognition. Often many difficult problems are associated with establish-

ment of a definite diagnosis of mediastinal tumor and with selection of the type of treatment to be instituted for them. These problems are best solved by close co-operation of the clinician, the roentgenologist, and the surgeon.

The occurrence of mediastinal tumors

has been known for many years but until recently their clinical recognition as a rule was attained so late in the course of the disease that surgical treatment was seldom possible and rarely successful. The advent of roentgen rays made possible the early recognition of these tumors before they have made serious inroads on the patient's general health. This has been an important factor in the successful results obtained from complete surgical removal of these growths. The older view was that most of these tumors were malignant. Such studies were based on cases of long standing. Early surgical removal of these growths has proved that a relatively high percentage of the lesions are benign. Nevertheless, I believe that all of these growths can become malignant and that the reason a high percentage of benign tumors has been seen in recent years is that they have been removed early, before they had undergone malignant change.

Differential diagnosis of these growths requires correlation of all of the available methods of diagnosis of thoracic disease. The clinical manifestations of these tumors are often meager and rarely pathognomonic, although they are always of value, when correlated with the laboratory findings, in establishing a final diagnosis and in determining the type of treatment to be instituted. The subjective symptoms and physical findings are rarely diagnostic but are often of value in determining the presence, situation, and probable type of lesion.

Tumors situated in the anterior mediastinum as a rule cause more subjective symptoms than those situated in the posterior mediastinum, because of the smaller space in which they are confined. This is true whether the lesion is benign or malignant. Pain is one of the most important subjective symptoms of these growths. Anterior mediastinal tumors usually are accompanied by pain, whether they are benign or malignant, but the pain of benign tumors is never as severe as that associated with malignant lesions. When lesions are benign there is a sense of pressure beneath the sternum, usually associated with dyspnea on physical effort. These symptoms are progressive in character, and are associated with, and augmented by, inflammatory lesions of

the respiratory tract. The tumors are commonly diagnosed as pulmonary or pleural lesions, such as pleurisy, pneumonia, or influenza. When anterior mediastinal tumors become malignant, the pain is usually more severe, at first occurs periodically, and is noted mostly at night. It gradually becomes more or less constant, until sedatives are required for relief.

Posterior mediastinal tumors may be benign or malignant. When benign, they are the most silent tumors that occur within the thorax. The outstanding clinical features are relatively few and mild symptoms, associated with large growths, for these tumors may fill practically the entire hemithorax without producing any marked symptoms other than dyspnea on exertion. When tumors situated in this region are malignant, or have undergone malignant change, relatively small growths are associated with severe pain; the patient's chief complaint is of the pain. Dyspnea and other clinical manifestations are usually more marked when the tumor is situated in the upper part of the posterior mediastinum, because in this region the growth not only produces pressure on the lung itself, but in many instances it causes direct pressure on the large bronchi and on the hilus of the lung; at times, also, it exerts pressure on the trachea, causing marked interference with respiration, particularly on exertion. With this latter condition there is often associated compression of the esophagus that causes some difficulty in swallowing.

Bronchoscopic and esophagoscopy examinations often are aids in establishment of the diagnosis by disclosing the presence of an intrinsic tumor which causes pressure on the bronchus or esophagus. These examinations are rarely conclusive. Thoracoscopic examination, after induction of artificial pneumothorax, may be of value, and a definite diagnosis often can be made by removal of a portion of the tumor through the thoracoscope. In most instances, however, sufficient information can be obtained from the more conservative methods of diagnosis to determine the advisability of surgical intervention; in such cases I prefer to perform exploratory thoracotomy.

The most important of the clinical

methods of diagnosis is roentgenologic studies, which require roentgenograms taken in different positions as well as roentgenoscopic examination of the thorax. The single roentgenogram is of little value in the surgical consideration of these tumors, for it determines only the presence of the tumor and its position in one plane of the thorax. Anteroposterior and lateral stereoroentgenograms are of great aid in determining not only the situation of the tumor in the thorax, but also the relation of surrounding normal structures to the tumor and any encroachment that the tumor has made on these structures. Anteroposterior stereoroentgenograms are especially accurate in determining the situation of the tumor in the vertical plane of the thorax, and the lateral films are particularly accurate in determining the relation of the tumor to the anterior and posterior thoracic walls. Roentgenoscopic examination does not furnish as much detail as do stereoroentgenograms, but it is of great value in determining the normal functional activity of intrathoracic structures, and any impairment of these structures which may have been caused by the tumor. It is especially important in differential diagnosis of aneurysm from anterior mediastinal tumors. Here the differential diagnosis is often made difficult by the adherence of dermoid cysts and teratoid tumors to the pericardium and great vessels, which causes transmitted pulsation. Horizontal roentgenograms are of value in selected cases; they are taken in different positions to determine fluid level within the pleural cavity or within the walls of a cystic tumor.

In many cases the diagnosis is still obscure even after roentgenoscopic examination and the taking of an entire series of roentgenograms in different positions. In some of these cases, additional information can be obtained by taking another series of roentgenograms after production of artificial pneumothorax, or after introduction of barium into the esophagus, and, in some instances, of iodized oil into the bronchial tree. It is important that the same technical methods, particularly as to the distance of the patient from the film, be used in cases in which patients are being kept under observation or treatment, so that any change

in the size of the roentgenologic shadows will be caused by variation in the size of the lesion and not by variation in technic.

Radiation therapy is often of great aid in the differential diagnosis of radiosensitive tumors. This is of particular importance in the selection of cases for surgical intervention, for one of the most important lesions to rule out is mediastinal lymphoblastoma. These growths are not amenable to surgical treatment, and in the roentgenograms they can simulate the appearance of practically any other primary intrathoracic growth. A definite diagnosis of lymphoblastoma often can be made by complete roentgenologic study. In cases in which there is any doubt, roentgen therapy should be utilized, for these tumors are radiosensitive and will rapidly diminish in size, and practically disappear, in a relatively short time. Some diminution in the size of the roentgenologic shadow of the growth can be noted as early as three to five days after the initial treatment.

Although roentgenologic studies of the thorax may be said to give the most important evidence in the clinical diagnosis of mediastinal tumors, they are of even greater importance in those cases in which surgical treatment is considered. Not only do they assist in selection of operable growths, but also they aid in determining the most accessible type of approach to the tumor and in determining the presence of conditions that might, after operation, become complications.

The most important considerations in the surgical treatment of mediastinal growths are early diagnosis, preoperative preparation of the patient, selection of the most accessible method of approach, application of adequate mechanical means for maintaining intrapulmonary pressure, complete removal, and postoperative care of the patient. The significance of early diagnosis of malignant growths is obvious. With benign growths it is important to institute surgical treatment before the tumor has encroached on important structures within the thorax, or before it has attained such great size that the operative risk is greatly increased. The immediate operative risk is often decreased by inducing preliminary artificial pneumothorax, which permits the patient to

become accustomed to the unilateral alteration of pulmonary pressure. This procedure cannot be carried out in those cases in which the lung is adherent to the tumor or thoracic wall, for the adhesions prevent collapse of the lung by air pressure. In cases of anterior mediastinal tumor it is rarely advisable to attempt artificial pneumothorax because all of the growths are firmly adherent to the thoracic wall, lung, and mediastinal structures, and there is danger of injury to the underlying structures when the needle is introduced into the thoracic cavity. In cases of posterior mediastinal tumor the growth is rarely adherent to the lung until it attains considerable size, unless it is malignant. The lung is adherent to malignant growths even when they are small. However, when artificial pneumothorax can be induced, this should be done three to five days before operation.

Much of the advancement that has been made in surgical removal of intrathoracic growths has been accomplished because of marked improvement in the administration of anesthetic agents. The greatest immediate danger in intrapleural operation is open pneumothorax, with collapse of the lung. This may produce severe respiratory and circulatory disturbances which may result in sudden death. These dangers have been practically eliminated by the use of intratracheal anesthesia, induced by means of an apparatus by which gas and oxygen are administered under positive pressure. I prefer cyclopropane or ethylene gas as the anesthetic agent. Administration of the anesthetic should be in the hands of a skilled anesthetist. In cases in which partial collapse of the lung is required, the lung should be permitted to expand fully every five to ten minutes during the course of the operation. A suction pump should be applied to the intratracheal catheter before it is withdrawn, to remove any mucus that may have accumulated in the trachea. It may be stated that use of intratracheal positive pressure anesthesia has been of the same relative importance to the technical problems associated with surgical removal of these growths as roentgen rays have been to the clinical diagnosis of the lesions.

The chief technical difficulties associated with surgical removal of these

growths are as follows: (1) Access is through the bony encasement of the thorax, and a method of approach must be selected that will give the greatest exposure of the tumor with the minimal amount of trauma to the thoracic viscera and thoracic wall; (2) traction on the important structures in the mediastinum, to which the tumor might be adherent, is an element of danger, and (3) complete reconstruction of the thoracic cage, so as to restore the normal relations of the thoracic viscera and to give the minimal amount of deformity, is advisable.

The methods of approach to and the types of operative procedures for mediastinal growths depend on the site of the tumor, its extension within the thoracic cage, and the presence of complications which may have been produced by the growth. Each case must be considered individually, depending on the indications presented. A few general principles apply to all cases. The most important is early operation and complete removal of the tumor; this may be performed in multiple stages but I prefer to remove the growth in one stage if possible, for the second operation may be more hazardous and difficult than the first. Incomplete removal of the growth may be followed by more serious trouble and usually subsequent operative procedures will be required.

The approach to anterior mediastinal tumors may be through the anterior or posterior wall of the thorax, but I prefer the posterior approach, particularly when the tumor projects into either pleural cavity, because much greater exposure can be obtained than by the anterior approach and the important structures to which the tumor is adherent, usually the heart, the great vessels and the lung, can be carefully dissected from the growth under direct vision. Any injury to these structures caused by the tumor or operative procedure can be detected and repaired immediately, and if infection is encountered drainage can be instituted readily. If the tumor is small and is confined within the anterior or superior mediastinum, or has ruptured into the lung anteriorly, the growth may be more accessible through an anterior approach, either by splitting the sternum or by resecting the cartilage and turning back the wall of the thorax. In some instances

the tumor can be removed extrapleurally through this anterior type of incision, while in all cases in which the posterior approach is used, the operation is transpleural. In this series of cases of anterior mediastinal tumor, twelve of the growths were teratoid, of which five were of the dermoid type, one was classified as a parasitic fetus because of its highly organoid structures, and two were squamous cell epitheliomas, malignant change having taken place in original teratoid growths. The anterior approach was utilized in three cases and the posterior approach in nine. The tumor was removed transpleurally in eleven cases and extrapleurally in one. There was one operative death in a case in which the growth was malignant. Eleven patients recovered from operation and were completely relieved of symptoms.

The approach to posterior mediastinal tumors is practically always through the posterior thoracic wall, and an attempt always should be made to remove the tumor extrapleurally. This, however, rarely can be accomplished and only in cases in which growths are small, for the tumor usually is adherent to the parietal pleura, which is ultimately opened, in some instances the tumor is placed so far back in the mediastinum that it is impossible to dissect the pleura away from the thoracic wall sufficiently to permit removal of the tumor.

The situation of the incision in the thoracic cavity depends on the site of the tumor. In all cases in which the tumor is situated in the posterior mediastinum, a posterolateral incision is made around the vertebral border of the scapula. The entrance into the thoracic cavity is made by partial resection of one rib, over the most central portion of the tumor. The thoracic cavity is then opened by incising through the periosteum and pleura in the bed of the rib. The tumor and its attachments in the pleural cavity are then explored, and if further exposure is desired, it can be accomplished by partial resection of an adjacent rib. In some cases in which there is a small tumor, or a collapsible cystic tumor, the growth may be removed through this small opening. If a larger opening is required, for a large solid tumor, the bordering ribs, both above and below the resected rib, are cut

and drilled, and at completion of the operation the cut ends are sutured together to reestablish the contour of the thoracic wall. Extreme care should be taken not to injure the structures to which the tumor is adherent within the thorax. There is always a fairly definite capsule over the tumor, which consists of pleura and a thin capsule of the nerve sheath.

This capsule contains many large vessels if the tumor is large. By careful dissection, this capsule usually can be separated from the adherent lung without producing any great injury to the lung. In some of the cases in which large tumors are very adherent to the lung, it is necessary to dissect the lung away from the tumor, and careful hemostasis, involving attention to the vessels on the surface of the lung, is required. Posteriorly these tumors are often very adherent around the aorta, particularly on the left side, and great care should be exercised not to injure the wall of the aorta. Also, care must be exercised to ligate the intercostal vessels that may be severed in the course of removal of the tumor. It is important to leave in place the posterior portion of the capsule of the tumor, to cover over the raw surface which is left in the parietal pleura after the tumor has been removed. The greatest difficulty in hemostasis is often encountered posteriorly, in dealing with intercostal vessels. In some cases, in which some erosion of an intervertebral foramen has taken place, hemorrhage may occur from dilated vessels in the spinal cord.

Tumors situated in the posterior mediastinum and spinal cord, so called dumb bell tumors, are removed by posterior mediastinotomy and laminectomy, which are performed at the same operation. This procedure, although carrying greater immediate operative risk because of the two operative procedures, is a more advisable procedure than the two stage operation because it avoids the possible complication arising in leaving a portion of the tumor, this may be very hazardous. Dr. Craig and I recently removed a tumor of this type with excellent result. This case has been reported elsewhere.¹

In this series of 35 posterior mediastinal tumors, there were 19 fibroblastomas, 4 of which had undergone malignant

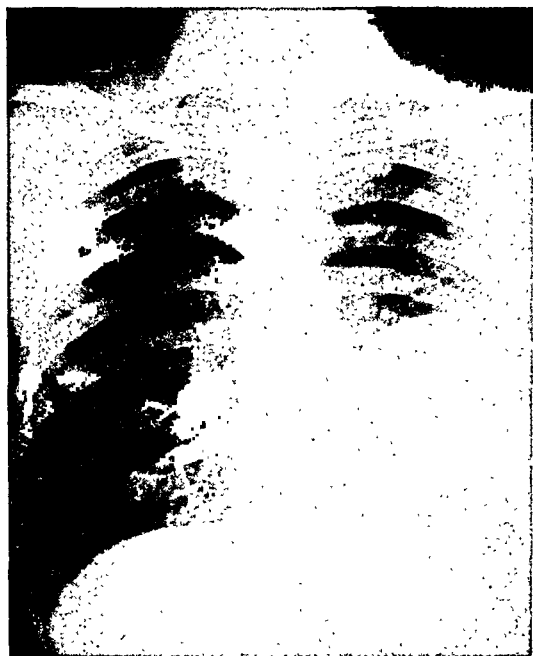


Fig. 1. Roentgenogram on admission of the patient. There is a large circumscribed shadow in the left lower part of the thorax.



Fig. 3. Appearance of patient on dismissal. The posterolateral incision is entirely healed.



Fig. 2. Neurofibroma measuring 14 by 13 by 8 cm. and weighing 825 gm.

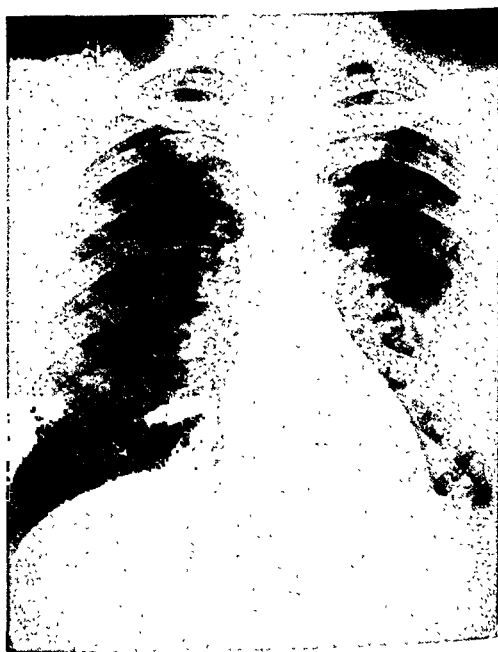


Fig. 4. Roentgenogram 5 months after operation. There is evidence of the previous resection of the seventh and eighth ribs, a thickened pleura at the left base and negative pulmonary fields.

change to sarcoma, 4 endotheliomas, and 12 chondro-osteosarcomas. The anterior approach was utilized in 4 instances and the posterior approach in 31 instances. All tumors were removed transpleurally. There were 4 operative deaths. Thirty-one patients recovered from operation. All of the patients whose lesions were benign have been completely relieved of symptoms. There have been 9 subsequent deaths from recurring malignancy, and the average postoperative duration of life in these cases has been 3 years and 7 months. Seven patients who had malignant growths are still living, one of whom has lived more than 10 years without evidence of recurrence.

Postoperative care is of the utmost importance. Particular care should be taken to maintain the blood pressure and to relieve any respiratory difficulty. It is usually advisable to give some form of medication intravenously, either during the operation or immediately afterward. If much blood has been lost, a transfusion of blood should be given; if this is not practicable, infusion of solution of acacia is satisfactory. Respiratory difficulty is the most serious immediate complication, and is best relieved by placing the patient in an oxygen cabinet. This is often a life-saving procedure, for sufficient oxygen can be obtained to tide the patient over the most critical postoperative period of respiratory embarrassment.

Report of a Case

A man, aged 45, came to the clinic March 8, 1934, chiefly because of arthritis of one year's duration, and to obtain advice as to the thoracic condition which had been discovered in the course of a routine examination made prior to his arrival. A roentgenogram of the thorax at that time had revealed a large shadow in the lower left portion of the thorax. He had had no pulmonary signs except a moderate morning cough which he thought was attributable to excessive smoking.

Physical examination revealed that the man was well developed and well nourished. He weighed 165 pounds (75 kg.). Examination of the thorax revealed slight dullness and diminished breath sounds at the left base and many whistling râles at both apices, especially on inspiration. Both ankles were swollen and stiff and both knees were swollen. Clubbing of the fingers and toes was present. The systolic blood

pressure was 128 mm. of mercury and the diastolic, 88. Urinalysis disclosed a specific gravity of 1.034, an acid reaction, absence of sugar and albumin, and an occasional leukocyte. The concentration of hemoglobin was 88 per cent. The flocculation test for syphilis was negative.

In a roentgenogram, a large, circumscribed shadow was seen in the left lower part of the thorax. The lateral view revealed the large tumor to be posterior, and that bone was not involved (see Fig. 1).

The man returned home to undergo physiotherapy because of the arthritis, but he returned to the clinic April 11, 1934, to submit to surgical intervention for the mediastinal tumor.

April 14, 1934, under intratracheal ethylene and ether anesthesia, left mediastinotomy was performed. A posterolateral incision was made between the seventh and eighth ribs. The posterior half of the eighth rib was resected first, and the tumor was exposed immediately. The posterior half of the seventh rib was then removed and the tumor was completely removed extrapleurally. The tumor seemed to originate between the seventh and eighth ribs, in the posterior mediastinum, and filled the entire lower left thoracic cavity, causing complete collapse of the lower lobe of the lung and partial collapse of the upper lobe. It extended across the entire thoracic cavity and caused considerable pressure on the heart and pericardium to which it also was attached. There were multiple bleeding points throughout the posterior mediastinum, from the visceral and parietal pleura, to which the tumor was firmly attached. These bleeding points were all ligated with catgut. This was done without opening into the pleura at any point. The lung was inflated as much as possible and the air was aspirated from the posterior mediastinal pocket, by suction, while the wound was being closed. The inner layer of the periosteum of the eighth rib was sutured, obliterating the posterior pocket as much as possible. The thoracic wall was completely closed without drainage.

The tissue removed was a neurofibroma, measuring 14 by 13 by 8 cm., and weighing 825 gm. (see Fig. 2).

Convalescence was entirely uneventful. The man was dismissed from our care on the eighteenth postoperative day, at which time his wound was entirely healed (see Fig. 3). He returned for observation five months following his operation, at which time he was enjoying excellent health. He had gained 21 pounds (9 kg.). The roentgenogram of his chest at this time revealed evidence of the preceding resection of the seventh and eighth ribs, a thickened pleura

at the left base, and negative pulmonary fields (see Fig. 4).

Summary and Conclusions

The clinical symptoms, surgical treatment, and operative results in 47 cases of anterior and posterior mediastinal tumors are summarized. One case is reported in detail.

Recognition of these growths by roentgenologic studies has made possible their early surgical removal, and microscopic study of them has shown that a relatively high percentage are benign, although they all may undergo malignant change.

Roentgenologic studies are of great value in selection of patients for surgical treatment, and in cases in which operation is found advisable such studies are of great aid in determining the situation of the growth and the type of operative approach to be used.

Surgical removal offers the only hope

for eradication of the disease, and it should be instituted early, before complications have occurred, for these increase the hazards or influence the results of the operative procedure.

The operative risk is not great, considering the magnitude of the operation, for in the 47 cases, in many of which the tumors were huge, there were only 5 deaths. In these 5 cases in which the patients did not survive operation, complications had occurred before the patients came to operation, and these complications played an important part in the inability of the patients to survive the operative procedures.

Reference

1. Harrington, S. W., and Craig, Winchell Mc. K.: Mediastinal and Intraspinal Perineurial Fibroblastoma (hour-glass or dumb-bell tumor) Removed by One Stage Operation, *J.A.M.A.*, 103:1702, 1934.

SURGERY IN PULMONARY TUBERCULOSIS

The Present Status

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Notwithstanding the rapid increase and spread in the application of surgery to pulmonary tuberculosis during the past quarter century, there is still much unacquaintance and confusion among the profession as a whole as to the position of surgery in this form of tuberculosis. Among the specialists even there is still a small group who see through the glass darkly as well as those at the other extreme of too great optimism and facile confidence. The present discussion will offer nothing new nor will it have to do with statistics; rather it will attempt to describe the several accepted surgical procedures, together with their indications and chances of success, that are employed in the present-day treatment of phthisis.

But first I would emphasize, as my major premise, that tuberculosis is a general systemic disease. It may attack several parts of the body simultaneously even though the recognized manifestations appear quite local. The organism

always responds as a whole, however, and it is this response that must be considered first and foremost in evaluating the selection and prognosis of surgical therapy. The chance of a favorable outcome by surgery varies directly with the propensity for repair and stabilization in any given case. This is shown by a temperature below 100° F., a steady pulse below 100, lack of anemia or dyspnea, and a gain in or maintenance of weight—absence of toxemia. In the presence of progressive activity and toxemia the risk of any surgery increases and the outlook becomes correspondingly poor. Surgery, therefore, offers most in the stabilized case with fibrosis, either with open cavity and positive sputum, or with repeated hemoptyses without other untoward signs of activity—in other words the good chronic.

All of the surgical procedures are based upon the principle of collapse therapy. This is best exemplified by pneumothorax, proposed in 1820 by James Car-

son, and first practiced in 1882 by Forlanini. The idea of artificial pneumothorax was originally conceived from the observation that certain cases of pulmonary tuberculosis did well following the establishment of a spontaneous pneumothorax. The procedure was slow in gaining popularity, but it has now been so widely adopted that only passing mention need be made. Due to the establishment and maintenance of artificial pneumothorax many people with tuberculosis, who would otherwise be confined to bed or sanatoria, have been enabled to live normal and gainful lives while their cure was in process. Again some of the most brilliant results of pneumothorax have been attained in the acute florid pneumonic form of the disease, for without the benefit of pneumothorax most of these patients would have succumbed.

The lung contains abundant smooth muscle and elastic tissue, which tend to contract concentrically about its center of gravity, a point lateral to and somewhat below the hilus. A properly established pneumothorax in a pleural cavity free from adhesions abolishes the opposing pulls of the chest wall and diaphragm in respiration and permits the lung to contract. With the destruction of the normal lung tissue by disease and owing to the normal retractility of scar tissue when present (provided this is not too dense) still further collapse is obtained of the affected portion of the lung and the walls of cavities approximated. Not only is added rest afforded with the closure of cavities, but also the lymphatic circulation is slowed, the tendency to spread is checked, toxemia diminished, and healing and fibrosis are promoted.

Internal Pneumolysis

The chief difficulty encountered in pneumothorax therapy is the presence of adhesions, which perforce render the establishment of the pneumothorax more or less incomplete and ineffective depending on their location, character, and extent. It is because of these adhesions that most of our present day surgical procedures have been developed. Collapse of the affected portion of the lung may be interfered with on account of a firm and widespread synechium between that portion, or the entire lung, and the chest

wall, or the adhesions may be localized as cords, bands, strings, and folds of pleura. If these can be removed, the pneumothorax may be rendered effectual and as complete as desired. Attack may be made upon them by stretching and the use of a tension or pressure pneumothorax, or attempts may be made to divide them surgically—the Jacobaeus operation of internal pneumolysis first described in 1916.

To quote from Matson:

The first requisite is that the case be one in which, after a reasonable length of time (4 to 6 months), it can be demonstrated that adhesions are preventing a satisfactory collapse of the lung, and recovery is doubtful with a continuation of the unsatisfactory pneumothorax. There must be an absence of any serious complication which would probably prevent the patient's recovery even if a satisfactory pneumothorax were established. The second requisite is that the pneumothorax cavity must be of sufficient size to permit one to manipulate the instruments. We wish however, to emphasize the point that the mere presence of adhesions is not an indication for operation.

With a maximum pneumothorax established, the pleura is examined with the thoracoscope. Under local or spinal anesthesia this is inserted in the middle or posterior axillary line and the condition of the lung, pleura, and the adhesions is carefully studied. The number of adhesions, their type and location, and the presence of lung tissue in them is determined. If they are found suitable for cutting, an electrode is introduced through the chest wall at that point which offers the most direct attack upon them. In the majority of instances the adhesions are back of the mid axillary line, therefore an approach from the anterior axillary or the mid clavicular line is frequently adopted. The penetration of the electrode through the pleura is observed through the thoracoscope and the adhesions are still further studied. They are then picked up and thoroughly coagulated and finally divided with the cutting current. By this careful procedure the larger blood vessels are avoided and the smaller ones present in the adhesions are coagulated before division, the presence of lung tissue in the adhesions is noted and the

line of division placed well beyond, and existing tubercles are seen and avoided. Provided the lung itself is not damaged the risk of pyogenic infection is almost nil and the chance of hemorrhage reduced to a minimum. A fluid reaction in the pleura may or may not occur. When it does, it is usually serous and absorbs readily, although rarely thick tuberculous pus may appear. If it is impossible to section completely the adhesion or adhesions at one sitting, they may be coagulated beyond the point of section. Then, if they do not stretch and thin out through the coagulated zone, a second pneumolysis may be undertaken later. From the figures at hand about 65 per cent of all suitable cases have their cavities closed and lose their positive sputum following internal pneumolysis for adhesions.

Apicolysis

In occasional instances when the lung is adherent and there is a localized cavity at the apex, the operation of plombage, extrapleural pneumolysis, or apicolysis is indicated. This should be reserved for those patients who are too sick for a localized thoracoplasty and in whom a phrenic interruption and scaleniotomy have failed. The operation has had its swings of popularity and regression; it cannot be warmly recommended because it is unsurgical in principle in that it creates a large dead space necessitating a foreign body plomb. Either the anterior or posterior approach may be used, the latter is preferable. A small portion of the second rib anteriorly or of the third or fourth posteriorly is removed subperiosteally, the periosteal bed is split and a line of cleavage established between the endothoracic fascia and parietal pleura. With the finger the parietal pleura and underlying lung are then carefully dissected free from the overlying ribs, the base of the neck, and the mediastinum. This free portion of lung and pleura is then displaced downward and the cavity filled with the plomb, which is usually paraffin, but may be muscle or fat, or vegetable fat. The muscles are carefully sutured and the skin closed without drainage. The disadvantages of the plombage operation are obvious: there is the presence of the large foreign body with its

dangers of infection, erosion into the lung or pleural cavity, or its eventual extrusion externally, and furthermore its presence hinders accurate roentgen ray examination of that portion of the lung.

The Phrenic Nerve

The subject of phrenic nerve interruption presents too large a subject to be discussed adequately in this short presentation. First proposed by Stuertz in 1911, the procedure was almost ignored until 1922. It then became increasingly popular until relatively recently when some of the enthusiasm for it as an easy panacea for unilateral tuberculosis seems to have abated. The operation itself is so simple that considerable harm has been done by its performance by those who have advocated and made use of it as a means to a quick cure, at the same time forgetting or failing to understand the essential principles underlying the treatment of pulmonary tuberculosis. Phrenic interruption may be either permanent or temporary. If the former is desired, the nerve is avulsed (phrenic exeresis) or carefully resected together with its accessory branches and the nerve to the subclavius. Until 1932 permanent phrenicectomy was almost universally advised. Since then, however, due in part to an excellent paper by Barnwell, temporary phrenic interruption by crushing or section and suture has been the operation of choice in most instances. This produces a paralysis of the hemidiaphragm for 6 to 10 months, which may be all that is required. If this proves beneficial, the paralysis can always be made permanent; if, on the other hand, the desired result with closure of the cavity has not occurred, no futile permanent impairment of function will have resulted and in case of spread of the disease to the contralateral lung adequate treatment of the new lesion will not be hampered.

The problem of phrenic interruption has still another dual approach. On the theory that if rest is the ideal treatment for tuberculosis, still further rest may be assured by paralysis of the diaphragm. Quite true, and I have no criticism of this hypothesis. But somewhat over 80 per cent of patients with minimal lesions become completely arrested with rest alone; therefore we have not deemed it

wise or necessary to suggest phrenicotomy or phrenicopraxis immediately any more than we would urge artificial pneumothorax in every such instance. Rather, we have looked upon it as a procedure to be advised for more specific indications, usually if one or more cavities are present. Indications for phrenic nerve interruption, therefore, may be listed as follows:

(1) In cases where artificial pneumothorax is impossible.

(2) In cases where the artificial pneumothorax is incomplete due to the presence of adhesions; e.g.: (a) those cases in which the adhesions are extensive and not suitable for division; and (b) those cases where the lung is adherent at apex and base and a bow-string mechanism is produced and accentuated by the pneumothorax. Here relaxation and rise of the diaphragm may be most beneficial.

(3) In cases where artificial pneumothorax has been associated with unduly sharp reactions.

(4) In artificial pneumothorax cases where obliteration of the pneumothorax is occurring, or when discomfort occurs with the required refills; e.g.: in those cases where continued positive pressure seems undesirable.

(5) In artificial pneumothorax cases when treatment is completed and the pneumothorax is to be abandoned; e.g.: (a) as a preventive against too rapid expansion and resumption of function; and (b) when the lung fails to reexpand properly and symptoms of mediastinal drag appear.

(6) As a method of election in properly selected cases, hoping it will suffice.

(7) In conjunction with artificial pneumothorax on the same or contralateral side as an aid to the pneumothorax and when bilateral pneumothorax is contraindicated or unsatisfactory.

(8) Sometimes for hemorrhage when artificial pneumothorax is impossible.

(9) As a test procedure if the patient is a borderline case and localized thoracoplasty is considered to be too much of an attack at that time.

side a complete thoracoplasty is rendered less effective because of the rise of the liver, which prevents a maximum collapse of the ribs. (3) We have no control over the amount of lung collapsed; hence the collapse may be greatest of the normal lung tissue, which we should like to conserve.

It is extremely difficult to determine beforehand when phrenic interruption will prove successful or even beneficial. Were we able to prognosticate the result with any degree of accuracy, much of our contemporary discussion as to the pros and cons of the operation would be eliminated. The action and interaction of the several forces involved must be considered in every case, and for this purpose fluoroscopic study is most helpful. No general rules can be laid down. We know that, left to itself, due to the presence of its elastic fibres and smooth muscle the normal lung tends to contract concentrically about its center of gravity. In the normal chest two forces alternately prevent and favor this; the up and down pull of the diaphragm and scalene muscles, and the inward and outward thrust of the chest wall. Furthermore these two forces do not act homogeneously on all portions of the lungs; that of the ribs varies at different levels, while the effects of the pull of the diaphragm vary not only in the long axis of the lung but also in the anteroposterior diameter because of the fact that the anterior tendinous portion rises much less than the posterior muscular part. In disease further alteration of these factors is caused; *first*, by the destruction of larger or smaller areas of the normal lung and the appearance here of fibrous tissue of repair, which may either contract or retract; *second*, there may be adhesions between the lung and chest wall or mediastinum; and *third*, the diaphragm may be fixed. Hence it is essential to understand as accurately as possible the mechanics and pathology within the chest before hazarding a prognosis as to what will happen in any given case after paralysis of the hemidiaphragm. One can be much more optimistic in the presence of a thin walled, small or moderate sized cavity in the posterior or mid-portion of the lung somewhere below the clavicle, with relatively little surrounding infiltration, a free diaphragm and only delicate

We do not advise phrenic interruption as a routine preliminary to extrapleural thoracoplasty for three reasons. (1) Frequently it renders cough more difficult and ineffectual and thus favors stagnation and spread of secretions and so makes convalescence more difficult and prolonged. (2) Particularly on the right

surface adhesions than where the cavity lies anteriorly in the midst of dense scar tissue, with a thick wall of its own and with a fixed diaphragm and an extensive adhesive pleuritis. In this type of case, phrenicectomy is a waste of time offering nothing to the patient but added pain and unjustifiable hope.

During the past five years division of the scalene muscles has been suggested independently of or as an adjunct to phrenicectomy. The operation is theoretically sound and should, I believe, always be combined with phrenicectomy for lesions in the upper half of the upper lobe. It is not difficult technically although care must be taken to avoid the brachial plexus and long thoracic nerve and the great vessels.

What results are to be expected following phrenic interruption? In a series of 500 cases O'Brien reported 50 per cent cavities closed. Graham reports 9 per cent cures by phrenicectomy alone and Alexander about 20 per cent. Most of the other reported series give 10 to 25 per cent of cures. In the realm of "improved," so much personal equation and variation enters that it leaves one bewildered as to what to think. The risk of the operation, while slight, is not entirely negligible. About 1.2 per cent will present some complication directly attributable to the operation and there is an operative mortality of about 0.5 per cent. The operation, however, has an important place in the treatment of pulmonary tuberculosis and with careful selection of cases one can confidently anticipate that the cures will rise and the disappointments recede.

Extrapleural Thoracoplasty

Finally we arrive at extrapleural thoracoplasty. This is not always undertaken, however, only after lesser measures have failed, but is sometimes the initial surgery of election. By extrapleural thoracoplasty we mean the subperiosteal removal of portions of several ribs without entering the pleura; thus the operative procedure does not involve the lung itself, but is carried out entirely in the normal tissues of the chest wall. In this manner that part of the bony cage of the chest which overlies the tuberculous pulmonary lesion is removed and collapse of the underlying lung thus liberated is pro-

moted by: *first*, the intrinsic tendency of the lung to contract due to its normal contractile tissue and also the fibrous scar tissue present; *second*, by the extrinsic factor of atmospheric pressure. The resected ribs drop downward and inward with a resultant collapse in these two dimensions. Regeneration of the resected portion of the ribs occurs fairly rapidly from the periosteum that has been left so that within a month a bony cuirass has begun to form. This is an essential feature of the operation for it is in this fashion that the collapse is maintained and respiratory movement in the underlying lung greatly diminished or abolished. Through the surgical application of collapse and rest, therefore, we come back to the first precept in the treatment of pulmonary tuberculosis—*maximum rest*.

The operation itself has undergone considerable change and development since its inception by deCernville in 1885. In great measure because of the work of Brauer and Friederich, and Sauerbruch our present paravertebral thoracoplasty has evolved, for they demonstrated that the most effective collapse of the greatest amount of lung tissue was brought about by a paravertebral resection of the ribs from their junction with the transverse processes of the vertebrae to beyond their angles. Modifications such as more extensive resection of the ribs and inclusion of the transverse processes themselves at times have been made but the basic principle of the operation remains as described by them. At present we feel that for upper lobe lesions the first rib to beyond the scalene tubercle, almost the entire second, and the third rib to the midclavicular line or beyond should be removed. Frequently, also, an apicolysis may be judiciously combined with the apical thoracoplasty at this time. Increasingly smaller proportionate segments of the remaining ribs need be resected ordinarily although in large basal or centrally placed cavities greater lengths of ribs must be removed over the site of the lesions, and in empyema it may be necessary to remove all of the ribs to their cartilages or even to their sternal attachments. Formerly the operation was done in one or two stages with resection of 9 to 11 ribs. Now it is always performed in multiple stages, at least two.

and frequently more. Furthermore, where-as we used to try to insist on a complete thoracoplasty in every case, we have found that this is not necessary, for, if a sufficient length of each rib is removed, in many instances a limited or regional thoracoplasty may be all that is required. The current practice, therefore, is to conserve as much good lung as possible by a more direct and extensive attack over the lesion itself.

When is extrapleural thoracoplasty indicated? The ideal patient is one with a unilateral chronic productive lesion who presents no symptoms of toxemia (i.e. with temperature below 100° F. and maintaining or gaining weight), without signs of tuberculosis elsewhere, and who has shown marked evidence of healing the pulmonary lesion as indicated by considerable fibrosis with retraction of the trachea to the affected side, elevation of the diaphragm, narrowing of the intercostal spaces, and supra- and infraclavicular retraction. Here we have a picture of the good chronic, so well emphasized by Archibald. This patient has already been under a careful and prolonged medical regimen and has accomplished all that is possible, but still has one or more open cavities with *persisting positive sputum or hemoptyses*. Without further help he is condemned to chronic invalidism and is a constant source of danger both to himself and others. Pneumothorax has proved ineffectual and phrenicectomy is useless because of the extensive adhesions, the already elevated diaphragm, and the density of the scar tissue and cavity walls. It is such cases that offer the best chance of success through thoracoplasty with closure of the cavities and disappearance of tubercle bacilli from the sputum.

Other indications for thoracoplasty are:

- (1) The presence of a solitary large cavity which has failed to respond to the less radical methods of treatment;
- (2) recurring frequent hemoptyses in the presence of negative sputum, which have failed to respond to simpler measures;
- (3) the occasional case that has severe pneumothorax reactions in whom phrenicectomy and rest have failed;
- (4) cases of tuberculous empyema following pneumothorax in whom the fluid persists and fails to resorb;
- (5) cases of spontaneous pneumothorax in whom the broncho-

pleural fistula fails to close and before a mixed infection occurs; (6) cases which fail to reexpand after the termination of pneumothorax therapy; (7) cases of tuberculosis empyema that have become secondarily infected with pyogens; (8) in certain bilateral lesions thoroughly stabilized and only after extremely careful selection. In all of these instances, however, there must have been evidence of stabilization or repair. Lacking this, even if the lesion be entirely unilateral, thoracoplasty will merely activate an already soft lesion, spread the disease, and result disastrously.

Besides the presence of a soft progressive lesion and toxemia there are other contraindications to the operation: the existence of cardiac or renal impairment, a low vital capacity and reserve air, while persistent dyspnea following phrenicectomy demands extreme caution. Patients over 50 do not as a rule respond well, and especial care should be taken with them. Tuberculosis elsewhere, as in the larynx, mouth, intestines, bones, or kidneys, is not of itself a contraindication, but thoracoplasty should be deferred until such lesions are under control; then it may prove most beneficial. Likewise hemoptysis is not a contraindication, conversely it is frequently a distinct indication. Each case must be considered on its own merits in light of the above. Dyspnea may be due to mediastinal retraction, and in such instances is an indication for the operation.

If the above recommendations are adhered to there will still remain an operative mortality of from 5 per cent to 13 per cent, depending largely upon the care with which the selection is made. In certain institutions where the facilities for postoperative care are not of the very best and where there is a high incidence of wound infections this mortality will be even greater.

By a cure is meant closure of the cavity and rendering the sputum negative on repeated concentration examinations. Either may occasionally result independently of the other and here the final verdict must be held in abeyance. Patience is required and provided the operation has been properly performed, such patients should be allowed eight or ten months further on a strict medical regi-

men before considering further surgery, for I have not infrequently seen a perfect and permanent result follow such an interval when in the early postoperative period it seemed as though failure were inevitable, and indeed it would have been had not strict rest and very carefully regulated exercise been insisted upon. The result is a well and most grateful patient who has been saved the risks of further and somewhat difficult surgery. About 35 per cent of all cases operated upon in the past have been rendered sputum negative and have been returned to an economically useful life. Some of the women have borne children without exacerbation of their disease, and men and women have resumed arduous occupations of manual labor. The tendency is toward a betterment of the above figure. For two years O'Brien has had over 80 per cent "cures," and in one of our institutions last year out of a series of 22 completed cases 80 per cent obtained negative sputum reports. In another group of 21 cases operated upon by me at two institutions this past winter 58 per cent have already become sputum negative with closure of their cavities. In this group there were two deaths—one following violent exertion and emotional stress a few hours postoperative due to acute cardiac dilatation, and the second at the end of the third week postoperative due to a progressive myocardial failure. It is fair to assert that we should expect a 65 to 70 per cent "cure." Furthermore, in evaluating these results one must bear in mind that of this group, without thoracoplasty, few if any would ever have been able to return to a normal or economically useful life.

The above enumerated procedures have so far been considered separately. All may be combined in various ways either unilaterally or bilaterally depending upon the lesions present and their response or lack of response to the therapy applied.

There is one further side to surgery as an aid in treating pulmonary tuberculosis to which but scant attention has been paid heretofore but which must assume a more prominent position in the future. That is the economic aspect. As physicians we owe a duty not only to the pa-

tient but to his family and also to our fellow men. It is our duty to cure the patient in the shortest possible time, thereby reducing his period of infectiousness to a minimum and also keeping the cost of care of him and his family as public charges at the lowest possible figure. With the burden upon our public institutions and welfare rolls becoming increasingly acute and with the spread of sickness and health insurance, the task of keeping the population well and restoring the sick to health and ability to work is placed squarely upon the shoulders of the medical profession.

I need cite but one instance. A man of 42 had had tuberculosis for 21 years and had passed most of those years as an inmate of a government hospital because of his positive sputum and frequent hemoptyses. During this time he had not only been unable to contribute anything but on the other hand was a public charge. Even at \$1 a day this amounts to \$7,300. At present the cost per hospital day is approximately \$4 per patient; hence we have indirectly contributed about \$25,000 toward his maintenance. Following extrapleural thoracoplasty his cavities were closed and he became sputum negative within three months, all of which could have been accomplished at least 15 years before at a saving of \$18,000 to the public.

If therefore physicians and surgeons believe that surgery is a help in the treatment of certain types of pulmonary tuberculosis, as we know it is, it is our cogent duty to urge its adoption with utmost earnestness in all suitable cases. In this way the patient will be restored to a gainful life more promptly, the spread of the disease among others will be retarded, and the public load will be lessened. Surgery will effect no magical cures nor will it in any way supersede a careful medical regimen, but it will shorten this markedly in some instances, and in others, where such measures have failed, its adoption will effect a cure and restore to normal life a group of patients, who, without its help would be condemned to chronic invalidism and remain a constant menace to their families and friends.

768 PARK AVENUE

CHRONIC ILLNESS DUE TO DIETARY DEFICIENCY

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The literature is replete with experimental and clinical evidence indicating the importance of diet as an etiologic factor in the production of disease. The genesis of such definite deficiency disorders as xerophthalmia, beriberi, scurvy, pellagra, and rickets by a deficient diet is too well known to require elaboration. Of far greater importance is the recognition of the fact, which has been emphasized by students of the problem, that many obscure disorders are in reality manifestations of chronic nutritional deficiencies.

The association of infection with scurvy was pointed out by Hess¹ who showed that such infections as furunculosis, grip, and nasal diphtheria were exceedingly common in infants affected by scurvy. Conversely, it was found by Mettler, Minot and Townsend² that many people with an appearance of good health suffer from a lack of well-being because of a nutritional imbalance. In such people infections may precipitate symptoms of a typical deficiency syndrome, but more often, a chain of symptoms not definitely traceable to a deficiency disorder.

Moore and Brodie³ reported a case of an infant, dying from cerebral hemorrhage, who presented at postmortem changes typical of beriberi. The study of the mother's diet during her pregnancy revealed that she subsisted on a markedly deficient diet.

Barnet Sure⁴ reported that nursing young of the albino rat require approximately a hundred times as much vitamin B in the form of dehydrated yeast as vitamins A and D furnished by cod liver oil during the lactating period and suggested that gastrointestinal disturbances in infants are due to a deficiency of vitamin B in the diet of the lactating mother. This deficient diet is the typical American diet composed of degerminated cereals, sugar and meat. This was recently corroborated by the very interesting work of Elsom⁵ who, in a carefully controlled experiment upon two humans, produced recognizable clinical symptoms corresponding in many respects to changes

described in vitamin B deficient animals. The diet of these two patients was adequate except for moderate limitation of vitamin B.

In the Orient, typical beriberi in breast fed infants whose mothers had been fed on polished rice is very common. This can be cured and prevented by adding vitamin B containing food (rice polishings) to the diet of the mother, or concentrated vitamin B to the diet of the infant.

Hoobler⁶ reported that mild forms of infantile beriberi are quite common in this country. The symptoms of this disorder—anorexia, loss of weight, spasticity of the arms and legs, rigidity of the neck, restlessness and fretfulness, pallor, low percentage of hemoglobin, and a plaintive whining cry—are readily alleviated by administration of sufficient vitamin B in the infant's diet.

Cody⁷ found that vitamin A is necessary to maintain the nutrition of the nasal and tracheal epithelia. He identified deficiency in vitamin B with a definite postnasal syndrome, consisting of a postnasal mucous discharge and smooth, moist, creamy-white and slightly thickened posterior tips of the middle turbinates.

Hess, Lewis and Barenberg¹⁰ concluded that the usual American diet is not deficient in vitamin A and that the addition of extra vitamin A does not add any immunity to infection. Yet they admit that a lack of vitamin A may occur as a result of vagaries of diet, or when absorption is defective, for example, in diarrhea and jaundice.

The relation of vitamin A to the prevention of respiratory infections is still unsettled.^{9, 10, 11, 19}

There is an accumulation of evidence that a deficiency in vitamin A may play a role in the formation of urinary calculi.^{12, 13, 14, 15} Vitamin A deficiency has also been connected with the production of various dermatoses. Loewenthal¹⁶ in studying prisoners in East Africa noticed that those suffering from night

blindness and xerophthalmia were affected by a clinical picture of acne vulgaris combined with a peculiar dermatosis. These patients subsisted on a deficient diet of maize, beans, dried meat, salt, and sweet potatoes. When one ounce of cod liver oil was added to their diet, the ocular and dermal symptoms cleared up. Although nutritional night blindness is rare in this country¹⁷ Jean and Zentmire found that 21 per cent of a group of children they tested had impaired adaptation to dark.¹⁸ Half of these children were retained for study and given a good diet including cod liver oil, and all of them regained normal adaptation to dark.

Clausen¹⁹ concludes that deficiency of vitamins A, C, and to some extent B, predisposes animals to infection. In man, loss of resistance to infection exists in outspoken deficiencies of vitamins A and C. It is also established that Rachitic infants have a greatly lowered resistance to pertussis. There is some evidence that a good diet during the early months of life will decrease the number of infections during the latter part of the first year and during the second year. But he adds that if the host is consuming an adequate diet, the addition of more vitamins will not increase resistance to infection.

The evidence cited emphasizes the fact pointed out by Sherman²⁰ that latent deficiency disease is a *real thing and not an imaginary concept*.

This article deals with a group of chronically ill patients observed in the outpatient department and the wards of the Mount Sinai Hospital. These patients have obscure ailments, present a multitude of complaints, and are often referred to by the doctors in the clinic as "chronic complainers." Their histories are often difficult to elicit and to evaluate. These patients pass from doctor to doctor, and from one clinic to another. They make numerous visits to the outpatient department, and are frequently put through extensive, elaborate and costly diagnostic procedures, for the most part with negative results. As a last resort they are sent to the Mental Health and Physiotherapy Departments, where prolonged sessions are without avail. This is because the basic underlying factor of a deficiency state has been overlooked.

On careful questioning these patients

give the following history: For some time past, often as far back as two years, or more, there has been increasing generalized nervousness and irritability; they have become easily upset and excited. They complain of distressing pains and aches in various parts of the body. The pains may be arthralgic, along the nerve trunks, or may assume a radicular distribution. Paresthesias, and tingling sensations of the fingers may be present. The patients invariably complain of fatigue, of inability to carry on their work, because of a sense of weakness. A generalized tenderness of the body and a tendency to bruise easily are outstanding complaints. They tell of frequent upper respiratory infections, of tender gums and bad teeth. The patients are usually constipated, their digestion is fitful, and their appetites are variable. There may be a history of moderate, and at times considerable weight loss. Often they call attention to edema of the ankles and feet.

A dietary history in all cases reveals that these patients have subsisted on a deficient diet for periods of one to three years and longer. Most of them are poor and are supported by charitable organizations and home relief. Their diets are usually composed of starches—bread, cereals, spaghetti, also olive oil, some butter, little, or no fruit, especially the citrus variety, and very few vegetables (most of them overcooked). These diets are low in protein and poor or even grossly deficient in vitamins.

Most of the patients under consideration are middle-aged. Females predominate in this series. The outstanding findings on physical examination are: (1) General pastiness and sallowness of complexion; (2) coated tongue—at times beefy red or smooth-edged; (3) carious teeth; (4) infected gums; (5) tenderness of various parts of the body, especially the calves of the legs and the interior margin of the tibiae and (6) ecchymotic spots on the skin—at times extensive.

Anemia is not often present. The blood platelets often are reduced in number. The blood chemistry findings are not markedly altered. The tourniquet test ($3\frac{1}{2}$ min. at 90 mm. of mercury) is frequently positive. Not uncommonly there is evidence of sinusitis and other upper respiratory infections. Frequently,

arteriosclerosis and hypertension are encountered as associated conditions

Therapy presented some difficulty, because the patients could not afford to procure the additional foods ordered. The cooperation of the social workers and the dietitians at the hospital was obtained and every effort was made to secure the needed funds. The daily diet was supplemented by the following foods: (1) a large can of irradiated evaporated milk or a pint of fresh milk, (2) the juice of six lemons or their equivalent in orange juice or grapefruit juice, (3) one-half pint of canned tomato juice, (4) whole wheat bread, (5) a liberal helping of meat, fish, cheese, and eggs and (6) cod liver oil, one ounce daily. In addition they were instructed to consume other foods that they were accustomed to take. Many of the patients who followed dietary directions showed a remarkable improvement in their physical and mental make-up. They gained weight and strength, and the tenderness of the body and calves disappeared.

Case Reports

Thus far we have observed twenty patients whose diets were grossly deficient for a long period of time. The accompanying table summarizes the symptomatology present in these patients.

The following four cases are reported in detail.

CASE 1 A C, age 29, white Italo American widow born in U.S. Admitted to Mt. Sinai Hospital O.P.D. Medical Clinic April 15, 1935. Her family history is irrelevant. She has had occasional colds. She underwent an appendectomy and uterine suspension 12 years ago. She had three normal deliveries 11, 7 and 5 years ago. Two miscarriages in the second month of gravidity occurred four and three years ago. The patient is living with her children, and is supported by the Emergency Home Relief. She was brought to the clinic by an investigator from the Home Relief Bureau because she was too weak to come to the clinic alone. She complained of pain in various parts of her body, weakness, fatigue and backache for the past five months. During the same period she noticed that she bruised easily, and that ecchymotic spots on her body would appear spontaneously. Her menses had become more frequent and profuse in the last four or five months. She had lost 10 pounds in 1½ months; her appetite had become

poor, and she vomited occasionally. Her bowels were regular, and there were no urinary, cardiovascular or respiratory complaints. Her sleep was poor, and she became easily excited.

Dietary history. For the past seven months the patient was forced to curtail her diet because of lack of income. She partook of one meal daily which consisted of spaghetti, some greens, and once or twice a week a little meat.

Physical examination showed a patient who was pale, of sallow complexion, and poorly nourished. Her pupils reacted to light and accommodation. Her teeth and gums were in poor condition, and the gums bled easily. Thyroid was small. The heart and lungs were normal. The abdomen was relaxed, and there was a moderate visceropertosis. She had varicose veins of the legs. Her knee jerks were active. There was a generalized tenderness of the muscles and bones of all extremities, especially the calves of the legs. An ecchymotic spot was present over the internal aspect of the left knee. A pelvic examination revealed a lacerated cervix, and a slightly enlarged uterus in anterior position. The rectal examination was negative. Her weight was 130 lbs.,

TABLE SHOWING SYMPTOMATOLOGY OF THE TWENTY PATIENTS OBSERVED. SYMPTOMS AND SIGNS ARRANGED IN THEIR ORDER OF FREQUENCY.

Symptom or sign	Number of patients in which it occurred
1 Deficient diet	20
2 Sallow complexion	20
3 Nervousness and irritability	19
4 Asthenia and fatigue	19
5 Generalized pain	18
6 Loss of weight	16
7 Constipation	16
8 Coated tongue	16
9 Generalized tenderness	15
10 Tender calves	14
11 Paresthesias	13
12 Frequent colds	12
*13 Carious teeth and gingivitis	11
14 Anorexia	10
15 Positive tourniquet test	10
16 Ecchymoses	9
17 Profuse menses	5
18 Pigmentation	3
19 Peripheral neuritis	1 doubtful 2

* Five additional patients were edentate. Of these 3 patients wore plates. Of the twenty patients 17 are female, 3 male. All are white. Sixteen patients were above 40. Twelve patients subsisted on a caloric intake of less than 1500 calories.

temp. 98.6, resp. 20, B.P. 120/80. Her urine was negative. Hemoglobin was 86 per cent; red blood cells, 5,400,000; leucocytes, 8250, of which the polynuclears were 68 per cent, lymphocytes 30 per cent, and mononuclears 2 per cent. Tourniquet test at 90 mm. of mercury, for four minutes was positive. The basal metabolic rate was plus 17 per cent. The diagnosis was dietary deficiency, eyestrain, and menorrhagia. She was given dietary advice, and was referred for refraction. Two weeks later she returned, distinctly worse, and stated that her diet had not been changed. The importance of supplementing her diet was impressed upon her, and the cooperation of the social worker was secured. She was told to consume daily, in addition to the food she was accustomed to take, the juice of six lemons or oranges, 1 can of tomato juice, 1 can of evaporated irradiated milk, $\frac{1}{2}$ lb. of meat daily, and two tablespoonfuls of cod liver oil.

When the patient returned two weeks later there was definite improvement. She felt and looked better. Her appetite was improved. She was stronger. Her bowels functioned better. There were no ecchymotic spots. She gained $2\frac{1}{2}$ lbs. The tourniquet test was faintly positive. On a subsequent visit two weeks later the improvement was found to have continued; the patient had resumed her housework. There were no further complaints of pain, nor was tenderness of calves present. The patient is still under observation.

CASE 2. R.G., white, 45 year old housewife, born in Austria. Her family history is irrelevant. She had had a long and checked previous history. She had typhoid fever 35 years ago, influenza 18 years ago. She had four pregnancies and one miscarriage. With the second and fourth pregnancy she developed eclampsia. In the past ten years she had been admitted 12 times to Mount Sinai Hospital, with the following diagnoses:

Sept. 28, 1925. Acute appendicitis. Appendectomy with drainage.

Apr. 27, 1926. Bicornate uterus. Excision of right horn of uterus, ligation of tubes.

Dec. 23, 1926. Postoperative ventral hernia. Ventral hernioplasty.

May 13, 1929. Cystocele, rectocele, cystitis cystica, anterior and posterior colporrhaphy.

Jan. 9, 1930. Chronic cystitis.

Feb. 4, 1930. Fissure in ano, external hemorrhoids, excision of fissure in ano. Hemorrhoidectomy.

July 22, 1930. Chronic cystitis, chronic pyelitis, solitary kidney (left).

Aug. 27, 1931. Psychasthenia.

Nov. 21, 1932. Asthma. Sensitive to duck and goose epithelium.

June 12, 1933. Chronic purulent sinusitis. Left sphenoidectomy.

Nov. 12, 1933. Psychoneurosis, bronchial asthma. Sigmoidoscopy.

The patient had attended practically every clinic in the O.P.D. of the Mount Sinai Hospital since 1925. Her visits to the surgical clinic dated from 1925, medical since 1926, gastrointestinal since 1926, ear, nose and throat since 1928, physiotherapy since 1927, gynecological and cystoscopic since 1933, eye since 1933, and skin since 1933. She attended many of these clinics simultaneously. During the past year she had numerous bladder irrigations, and many injections of adrenalin for her asthma. During the past few years she had noticed large and painful ecchymoses on her body. She had attacks of rectal and nasal bleeding, and her menses had become profuse during the same period. For the past two years she complained of constipation alternating with diarrhea, and backache. No limitation of motion was found in the spinal column. Complete gastrointestinal studies were negative. Her blood was essentially negative chemically, serologically, and hematologically. Repeated urologic studies both cystoscopic and roentgenologic showed that the function of her solitary kidney was good. In an attempt to arrest her bleeding tendencies she was given numerous injections of snake venom without success. When she came to our clinic on March 12, 1935, she complained of pains and aches everywhere in her body. She also complained of black and blue spots on body, bleeding gums, rectal bleeding, nasal bleeding, and menorrhagia. She stated that her body is very tender to touch, and that she suffers from attacks of asthma, frequent upper respiratory infections, and sinusitis. She also claimed to be so weak as to be unable to attend to her housework.

Physical examination showed a chronically ill, highly nervous female, weeping at the slightest provocation. The positive findings were generalized tenderness, especially of calves and shins, widespread, ecchymoses, lumbar spondylitis, and varicose veins of legs.

Her diet for more than two years was grossly inadequate. Her estimated average caloric intake was 800 calories. Her diet consisted of meat, fish, and cheese, each twice weekly; cooked vegetables once daily; very little, if any, fruit (practically none of citrus variety); bread, one slice with each meal; milk, very occasionally; coffee, three cups daily. Her blood pressure was 130 systolic, 80 diastolic, pulse 80-90, tourniquet test—4 minutes at 90 mm. of mercury was strongly positive. She was placed on a balanced diet and was especially urged to take large quantities of citrus fruit, and tomato

juice. It must be admitted that we did not expect to secure a therapeutic result in this patient. However, much to our surprise and satisfaction she returned on March 27, 1935, much improved. She felt stronger, and had fewer complaints. General aches and pains were less marked in spite of an acute ear infection which had to be incised.

On several follow-up visits, the latest June 28, 1935, patient continued improving. No ecchymoses for three months, although the snake venom injections were stopped in March. General tenderness had disappeared, there was no bleeding from the nose or rectum, and her menses were less profuse. The tourniquet test was very slightly positive. She had resumed her household duties. Mentally she is much more placid than formerly. She has been taking large amounts of fruit juices, but her protein intake is still low.

CASE 3 L E. This patient is a white female, 46 years of age, married, born in Russia. Her family history is irrelevant. She had typhoid at four years of age. She had no other illness except frequent colds, and complaints pertaining to her digestion and present illness. The patient has been married twenty-five years. Her husband is living and well. She has three children, 21, 16, and 14 years old. She had two abortions. Her menopause took place 14 years ago.

The patient came to the Mount Sinai Hospital O.P.D. in November 1926. She complained of epigastric distress, pain in R.U.Q. and arthralgias of phalangeal joints. At that time her physical examination was negative. Her blood pressure was 95/60, and blood urea 16 mg per 100 cc. The blood Wassermann test was negative. X-ray studies of her gall bladder and gastrointestinal tract were negative. She was referred to the neurological clinic in August 1928 where no organic cause for her complaint was disclosed, and a diagnosis of psychoneurosis was made.

She returned to the clinic in 1930 with complaints of pain all over her body and a feeling of being cold. Her physical examination was negative. Blood pressure was 150/60, and the Wassermann test was again negative.

She returned in February 1933 seeking relief for pain in the finger tips. The neurologist then found that she suffered from a peripheral neuritis of unknown etiology. At this time she had paresthesias and pain over her entire body, especially the extremities. Her ankle jerks were more diminished than her knee jerks. There were peripheral sensory disturbances in the extremities to all modalities. She stated that she lost 25 lbs. in six months. Her blood count showed

Hemoglobin, 98 per cent, red blood cells, 6,100,000, white blood cells, 10,500. The stained smear was normal. Her basal metabolic rate was plus 23 per cent. At that time her liver and spleen were not only found to be enlarged, but also ptosed. The liver was tender. Despite these findings the patient's complaints were considered to be functional. She was therefore referred to the physiotherapy department where she was treated on 50 separate visits between June 1933 and March 1934. As no improvement resulted the patient was sent to the medical clinic for an opinion. We saw this patient in December 1934, and left the following notation: "Patient has a multitude of complaints. She has pitting edema of the lower extremities. Diet utterly insufficient. Her complaints are due to chronic malnutrition. The tingling of the fingers is probably due to a vitamin B deficiency. A high caloric high vitamin diet was prescribed."

We did not see the patient again until June 1935. During the interval she was treated in the gastrointestinal clinic. There she was found to have an achlorhydria, however, following an injection of histamine, free HCL was secreted. X-ray examination of the stomach, duodenum, gall bladder, and spine were negative.

When the patient returned to our clinic, she again gave a history of weakness, fatigue, generalized pain and tenderness, paresthesias, especially in hands and feet, swelling of legs, feet and lower back, and a loss of 40 lbs in two years. All of her teeth had been removed and replaced by plates.

Her dietary history was as follows. Because of poverty she subsisted for the past four years on a very scanty diet. The calculated average caloric intake was about 1500 calories. The diet consisted of Meat, 1½ lbs for 5 persons twice weekly, fish, 1 lb for entire family of five twice weekly, 1 egg weekly, cheese once weekly, milk 2 glasses daily, bread, 1 slice, no vegetables, fruit once weekly.

Physical examination revealed a poorly nourished, sallow complexioned female. Her tongue was beefy and coated, heart and lungs were essentially normal, liver enlarged, ptosed, tender, spleen was palpable, there was pitting edema of the legs, feet, and over the sacrum, and no ascites. There was tenderness of the entire body, especially the calves. The skin of the dorsum of the hands was deeply pigmented, symmetrically and felt leathery. Neurological examination showed all deep reflexes depressed, left knee jerk less strong than right, left ankle jerk absent, right depressed, glove and stocking sensory dis-

turbances present for all modalities, vibration absent in hands and feet, position errors present in toes of right foot. Mentally, the patient was very irritable, and apprehensive. On the basis of the above findings the diagnosis of avitaminosis, possibly pellagra was made, and the patient hospitalized.

The patient upon admission to the hospital was placed on a high caloric, high vitamin diet, and gained 5 lbs. in two weeks. She looked and felt better. The tingling and paresthesias of her fingers decreased. The sacral edema disappeared, but the peripheral neuritis and edema of the legs were still present. It was then attempted to ascertain whether crystalline vitamin B would have any effect on the peripheral neuritis. Accordingly for a control period of three weeks she was placed on the regular ward diet, after which the vitamin B therapy was commenced. The patient lost weight and began to complain; her mental symptoms grew more pronounced, and she became irritable and unruly. The edema of the legs disappeared entirely, although the peripheral neuritis was not appreciably influenced. It was then planned to reinstitute the original high vitamin, high caloric diet, but the patient refused to remain in the hospital and left against advice.

CASE 4. S.G. is a 49 year old female born in Austria. Her family history is irrelevant. Her previous history was negative except for frequent colds. Her menses were regular till November 1934, but since that time they came at infrequent intervals. She had two children 16 and 13 years ago. She had no miscarriages. This patient is widowed and is receiving aid from various social agencies.

Her first visit to the O.P.D. of the Mount Sinai Hospital was in 1930. She complained of pains throughout her body, frequent colds, and swelling of her feet. Her physical examination was negative except for carious teeth and spongy gums. She weighed 119 lbs., her blood pressure was 140 systolic and 70 diastolic. She remained away from the clinic until June 1934.

She came to the gynecological clinic with a complaint of pruritis vulvae. She had a moderate cystoectocoele, a second degree uterine prolapse, and a small cervical polyp. Her uterus and adnexa were normal. Her urine was normal, and smears from urethra and cervix were negative. A biopsy from the cervical polyp showed a fibromyomatous tumor. She was under treatment in that department until October 1934. She then complained of pain in the lower spine and swelling of her feet.

Physical examination revealed a tender coccyx and edema of her legs and feet. Since her weight was 122 lbs. (ideal 100

lbs. for her height and age) it was thought that she should be placed on a reduction diet of 1000 calories. When her diet was investigated by the dietary instruction department of the clinic it was found that her diet was unsatisfactory, and a high vitamin moderately high caloric diet was ordered. For a time she followed this diet and improved considerably. However, because of home conditions she failed to adhere to the diet and returned to the medical clinic in March 1935 complaining of pain under the right scapula, spontaneous ecchymoses, and weakness. Physical examination showed a short, stocky, poorly nourished, middle-aged female. She had tender, necrotic, easily bleeding gums, carious teeth, scattered ecchymotic spots on body, and tenderness of muscles and calves. She also showed edema of legs and feet, and had a zone of hyperalgesia on the right side corresponding to the level of the sixth dorsal vertebra. The tourniquet test was positive. The blood pressure was 130 systolic and 90 diastolic. Her blood count showed: hemoglobin, 86 per cent; red cells, 5,040,000; white cells, 9250, of which the polynuclears were 69 per cent, lymphocytes 25 per cent, mononuclears 3 per cent, and eosinophiles 3 per cent; platelets, 195,000. X-ray of spine showed marked bony atrophy, and x-ray of chest revealed healed tuberculous foci, thickened pleura, and arteriosclerosis of heart and aorta. X-ray examination of long bones was normal. Blood calcium was 11.6 mgs., blood phosphorus was 3.6 mgs. per 100 c.c. Similar figures were obtained at a subsequent examination three months later.

A diagnosis of dietary deficiency was made. She was placed on a high vitamin, high protein diet. She was urged to consume large quantities of citrus fruit juices. On several follow-up visits from March to July 1935 the patient appeared to be much improved. Ecchymoses had disappeared, and she looked better. Tenderness of calves was still present, although less marked. The tourniquet test was still slightly positive. The patient is still under observation.

Discussion

The dietary deficiencies presented by these patients are probably multiple. McCollum and Simmonds²¹ state that it is doubtful whether a deficiency disease ever occurs uncomplicated in man or animals. When the list of foods available is greatly restricted, and the diet made unsatisfactory to a pronounced degree the pathological condition produced is a complicated one. The same view is expressed by Cowgill and Hess,²¹ and Mackie.²²

Thus the tendency to edema may be due to a protein deficiency. The neuritic symptoms and generalized tenderness are in all probability due to a vitamin B deficiency.^{21 22 23 24}

The tendency to ecchymoses and the generalized tenderness is probably related to a vitamin C deficiency. However, some proof was recently advanced that vitamin B deficiency may produce ecchymoses.⁶ Hess,²⁵ Wright,²⁶ G Dalldorf,²⁷ and G Dalldorf and Russell²⁸ reported that increased capillary fragility is one of the signs of vitamin C deficiency. The tendency to upper respiratory infections may be influenced by a shortage of vitamins A and C.^{27 19 25 30} It is also fair to assume that because of the low protein intake a relative shortage of vitamin G also exists in some of these patients.^{30 31} The same probably applies to vitamin D. One should also take into consideration that grossly deficient diets lead to disorders due to lack of such vital minerals as calcium and certain important amino acids.³²

Comment

It will be noted that several of our patients were psychoneurotic. The anamnesis and physical findings should be examined in this type of individual with special attention to the possibility of dietary deficiencies. Their multiplicity of complaints often persuades them to eliminate essential foods from their diets.^{31 33 34 35}

The problem considered in this paper is important not only from the diagnostic and therapeutic viewpoint as far as the individual patient is concerned, but it also has widespread sociological implications. With over 20 million people in this country on relief, the possibility of deficiency states developing because of insufficient

diet must be kept in mind. When a deficiency does develop, the most vulnerable—the very young, and the persons past middle age—are affected first. The seriousness of the problem from a public health standpoint is appreciated by all students of the question. This was recently emphasized by J S McLester in his Presidential Address before the American Medical Association.²⁹

Summary

1 Chronic illness due to dietary deficiency is discussed.

2 A dietary deficiency should be suspected in any case presenting the following symptomatology:

- (a) Asthenia and fatigue
- (b) Nervousness and irritability
- (c) Generalized tenderness, especially of calves
- (d) Paresthesias
- (e) Dental caries and gingivitis
- (f) Coated, beefy, red, or smooth tongue
- (g) Increased capillary permeability.
- (h) Constipation
- (i) Frequent upper respiratory infections
- (j) In more advanced cases—anorexia, vomiting, edema, peripheral nerve changes, and pigmentation of skin
- (k) History of a faulty or inadequate diet

3 Evidence is presented that the symptoms complex described is probably due to multiple deficiency.

4 The sociological, Public Health and medical aspects of dietary deficiencies are indicated.

5 A simple plan for supplementary dietotherapy is suggested. The daily diet of the patient should be enriched with fruit juices, milk, whole wheat bread, meat, fish, cheese, eggs, and cod liver oil.

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References

1 Hess A F. Infantile Scurvy. V. A Study of its Pathogenesis, *American Journal Diseases of Children* 14 337, 1917.

2 Mettler, S R, Minot G R, and Townsend, W C. Scurvy in Adults, *J.A.M.A.* 95 1089, 1930.

3 Moore, C U, and Brodie, J L. Relation of Maternal Diet to Hemorrhage of Newborn, *A.J.D.C.* 34 53 60 1927.

4 Sure, Barnett. The Relation of Vitamin B Deficiency to Infant Mortality, *American Medicine* 23 781, 1923.

5 Sure, Barnett. Dietary Requirements for

Fertility and Lactation XV, etc (Detailed Report) *Journal Biological Chemistry* 76 685, 1928.

6 Elsom Katharine O Shea. Experimental Study of Clinical Vitamin B Deficiency, *The Journal of Clin Invest*, 14 40, 1935.

7 Hoobler, B R. Symptomatology of Vitamin B Deficiency in Infants, *J.A.M.A.* 91 307, 1928.

8 Hoobler. Use of Vitamin B in Diets of Infants, *J.A.M.A.* 96 675, 1931.

9 Cody, C C. Relation of Vitamins A D B G to Otolaryngology, *Archives of Otolaryngology*, 16 603, 1932.

10. Hess, A. F., Lewis, J. M., and Barenberg, L. M.: Does our Dietary Require Vitamin A Supplement, *J.A.M.A.* (Aug. 26, 1933).
11. Gardner, Esther L., and Floyd W.: Vitamin A and Colds, *Amer. Journ. Dis. of Child.*, 47:1261, 1934.
12. Osborne, T., and Mendel, L. B.: The Incidence of Phosphatic Urinary Calculi in Rats fed on Experimental Rations, *J.A.M.A.* 69:32, 1917.
13. Leersum, E. C. V.: *J. Biol. Chem.*, 79:461, 1928.
14. McCarrison, R.: *British Med. J.* 1:1009, 1931.
15. Higgins, C. C.: Production & Solution of Urinary Calculi, *J.A.M.A.* 103: 1296, 1935.
16. Loewenthal, L. J. A.: A New Cutaneous Manifestation in the Syndrome of Vitamin A deficiency, *Arch. Dermatology & Syphilology*, 28:700, 1933.
17. Wilbur, D. L., and Eusterman, G. B.: Nutritional Night Blindness (Report of a case), *J.A.M.A.* 102:364, 1934.
18. Jean, P. C., and Zentmire: A Clinical Method for Determining Moderate Degrees of Vitamin A Deficiencies, *J.A.M.A.* 102:892, 1934.
19. Clausen, S. W.: Nutrition & Infection, *J.A.M.A.* 104:793, 1935.
20. Sherman, H. G.: Genl. Review of our Recent Knowledge of the Vitamins, *Bulletin N. Y. Acad. of Med.*, 10:457, 1934.
21. McCollum E. V., and Simonds, N.: *The Newer Knowledge of Nutrition*, The McMillan Co., p. 170.
22. Cowgill, G. R.: Vitamin B in Relation to the Clinic, *J.A.M.A.* 98:2282, 1932.
- Hess, A. F.: *Scurvy, Past and Present*, J. B. Lippincott & Co., p. 249.
22. Clausen, S. W.: The Effects of Moderate Deficiency of Vitamins, *The Bulletin of the N. Y. Academy of Medicine* 10:471, 1934.
23. Wechsler, I.: Etiology of Polyneuritis, *Archives of Neurology and Psychiatry*, 29:813, 1933.
24. Minot, G. R.: Some Fundamental Clinical Aspects of Deficiencies, *Ann. Int. Med.*, 3:216, 1929.
25. Hess, A. F.: Recent Advances in the Knowledge of Scurvy and the Antiscorbutic Vitamin, *J.A.M.A.* 98:1429, 1932.
26. Wright, I. S.: *Proc. Soc. Exper. Biol. & Med.*, 32:475, 1934.
27. Dalldorf, G.: A sensitive test for sub-clinical scurvy in man, *Am. J. Dis. Child.*, 46:794, 1933.
28. Dalldorf, G., and Russell, H.: The Effect of Cevitamic Acid Injection in Capillary Resistance, *J.A.M.A.* 104:1701, 1935.
29. McLester, J. S.: Nutrition and the Future of Man, Presidential Address, *J.A.M.A.* 104: 2144, 1935.
30. Underhill, F. P.: Clinical Aspects of Vitamin G Deficiency, *J.A.M.A.* 99:120, 1932.
31. Roberts, S. R.: Types & Treatment of Pellagra, *J.A.M.A.* 75:21, 1920.
32. Mackie, Th. T.: Ulcerative Colitis II Deficiency States, *J.A.M.A.* 104:175, 1935.
33. Tanner, W. F., and Ehols, G. L.: The Occurrence of Pellagra in Patients Apparently Receiving an Ample Diet, *J.A.M.A.* 76:1337, 1921.
34. Carley, P. S.: A Case of Pellagra following Voluntary Reduction of Diet, *J.A.M.A.* 91: 879, 1928.
35. Spies, T. D.: Treatment of Pellagra, *J.A.M.A.* 104:1377, 1935.
36. Turner, R. G., and Loewe, E. R.: Infection of Accessory Sinuses in Vit. A Deficiency, *J. Inf. Dis.* 52:102, 1933.

PIPES, NOT CIGARETTES, CAUSE MOST TOBACCO BLINDNESS

A good word for cigarettes and a bad one for pipe smoking, as causes of the dimness of sight due to tobacco poisoning of the eye's nerve cells and called tobacco amblyopia, were reported by Dr. H. M. Traquair of the Royal Infirmary of Edinburgh, Scotland, at a recent meeting of the Medico-Chirurgical Society in that city, says Dr. E. E. Free in *The Week's Science*. During the past 22 years the Royal Infirmary has treated 1856 cases of this tobacco blindness, the first symptom of which often is failure to recognize friends on the street, followed by a slow increase of what seems to be a continual mist in front of the eyes. Only eight of all the patients treated were women. Nearly all of the men were either pipe smokers, snuff users or persons who chewed tobacco instead of smoking it. As small an amount of tobacco as half an ounce a week can cause this tobacco blindness, although the usual dose necessary to cause trouble is about three ounces of pipe tobacco every

week for a considerable time. In one especially susceptible individual, smoking only ten cigarettes a day caused the eye difficulty but the total number of cigarette smokers affected was extremely small. Dr. Traquair finds that excessive use of cigarettes is likely to damage the heart or the digestion and thus force the victim to stop smoking before there are noticeable effects on the eyes. Among pipe smokers and snuff takers it is the eye trouble which usually happens first. Fortunately the tobacco blindness is curable after a few weeks by stopping all use of tobacco. Just why pipe smoking should affect the eyes while cigarette smoking strikes at the heart or stomach Dr. Traquair was unable to say.

In some European countries medical graduates are required to practice several years in the rural districts before settling in the towns of their choice, in order to remedy the scarcity of rural physicians.

OBSERVATIONS ON TREATMENT OF MENTAL DISORDERS IN SMALL GROUPS

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The great war opened up greater opportunities and then created a wider acceptance of psychiatry. Many men trained in this field, the author included, chose to enter the private practice of this special field in medicine after the war. It soon became evident to us that in meeting the problems presented, resources of many kinds must be called upon. Certainly no one brand or school of psychiatric thought was adequate to meet all demands, and certainly these demands were of varieties not met with intramurally. The greater number of our patients were not in need of hospital care. It might be that general medical survey with correction of defects there, plus a rapid survey and interpretation of their psychiatric or their psychological strains gave rapid relief. In a certain proportion, however, it was soon found necessary to have a place or places to which to remove them from the home environment in order to get temporarily for them the factors, or perhaps better, the control of the factors necessary for their proper care. It has, of course, been long known that isolation from the home environment is beneficial, but we are not satisfied in this era to stop at that. General hospitals are not usually equipped for the special needs in these cases, nor do they desire to receive such problems.

It became necessary, therefore, to develop or support the development of nursing homes. Here though the regime, the medication, and to a certain extent, the proper attitude towards such patients could be attained, it was found most difficult to secure such personnel and such activities for them as was most desirable. After nine years and many discouraging and even heart-breaking experiences in the struggle to attain ideals of care that seemed worthy, it eventually became imperative to develop a unit where full control over all factors was in my own hands.

By now it has become my strong belief

that in addition to the personal application of the psychotherapeutic methods of the day, that such persons as need treatment should be surrounded by nurses with personality background of culture and refinement, plus special training in psychiatric nursing and approach. Moreover, a proper atmosphere is considered to be an important condition. And by atmosphere, I believe we should mean comfortable physical surroundings, dignity of personal relation, sincerity, friendliness, and freedom from casualness and from too much institutional formality or evidence of the machinery of organization—in other words, an atmosphere where the individual has preserved for him, his self-respect, his sense of security, and his identity.

It took several years to acquire all of these requirements which were attained only by long hours of application to the problem.

At this point I will digress long enough to assert that there could, of course, be no excuse for enumerating these personal beliefs and experiences except to give the setting and background for the thesis I wish to present. To develop this I present briefly a few cases selected from our files.* From these records I hope to draw some justifiable conclusion that can have a wider application than thus far indicated.

Also, in explanation, these cases were selected from no period of our experience, nor for any particular type, but to attempt to show a cross section of our experience of six years in the application of the principles of care heretofore enumerated. Furthermore, these cases come largely from the every-day walks of life, and many are of the social status of the average of our public hospitals. However, the individuals were often admitted because of indications of moderate types of

* Twin Elms, Syracuse, New York.

*Read at the Annual Meeting of the Medical Society of the State of New York,
Albany, May 15, 1935*

disorder. In some instances we admit from the home cases on the admonitions of the families who might wish to try to avoid accepting or resorting to public care, and we can scarcely condemn the attitude of self-respect and independence thus exemplified. However, we must not support the feeling of stigmatization that so often attaches to public care. Then there is certainly another side from the family point of view. This is the desire to be near and to give their loved ones the various refinements of personal individual service not possible in the mass care in public hospitals. I do not mean, of course, harmful indulgences, for I have no sympathy with such, nor do I feel that the other extreme is justified. Yet in our scientific zeal, should we be unmindful of the tragedy of shattered hopes which mental sickness so often implies and the need for those concerned to gradually accept the certainty of a hopeless disorder? Other sources of our cases are the local Psychopathic Hospital and even a few from state hospitals.

Now let me present illustrative cases:

Case I. E. L., 22, English Jewess, shop girl. Admitted June 20, 1931, from Syracuse Psychopathic Hospital because she was a deportable alien. Relatives wished to avoid this and to allow her recovery and then return to her mother in London. Overactive, overproductive, variable delusional content. This continued slowly moderating for one week and by that time she was quiet enough to walk around the grounds and to be on the street in two weeks. July 17th was working 4½ hours in the occupational studio, though somewhat elevated in mood occasionally. Discharged July 27. Residence 35 days. Total illness 60 days. August 22, 1931, sailed for England unaccompanied.

Case II. M. L. W., 20, married, housewife. Admitted March 24, 1932, from Syracuse Psychopathic Hospital. One mild previous attack February, 1930. Overproductive, overactive. Delusional content. Rather childish, immature type; steady improvement with packs and sedative baths. Sixth day she was mingling with other patients. On the 7th day she started occupational work in the studio. Frequently disturbed after family visits. Occasional outbursts at other times. By May 4th she had improved so as to try two days at home. On return showed good behavior. Discharged May 7. 44 days residence. 51 days illness.

Case III. A. O'M., 45, single, music

teacher. Admitted at Syracuse Psychopathic Hospital March 4, 1932. Onset three months previously. At that hospital she was restless, noisy, moaning, wailing, resisted care and would lie on floor, constantly productive, nihilistic trend, no insight. Commitment to state hospital advised. Family decided to try a private hospital. Admitted March 29, 1932. Quiet, cooperative on arrival; dejected, "weepy." On April 4, she began working in occupational studio. Some further delusional ideas expressed April 27. Showed remarkable change the next week. Dejected demeanor gone. Later some swing to lower mood. Occasional period with delusional content. After successful visits home and to relatives, she was discharged June 6, 1932. 68 days residence. Total illness period 158 days.

Case IV. D. S. G., 68, widow. Admitted from her home on physician's certificate, January 25, 1933. She had been well up to the previous November. She began to be tired at Christmas time. Sleepless. January 15, began to be fearful, thoughts of poverty, of having contracted debts she could not pay. The state troopers would apprehend her, drew shades. Retinal arterio-sclerosis. B. P. 180/90. Enlarged heart. Leaking valves. Slight edema along tibiae. She had continued fears; feelings of fear of vague harm, some confusion at times. Slow improvement until she had regained clearness and confidence. Most fears gone. Went home with companion July 7.

Case V. V. D., 20, single, student. Admitted April 21, 1933. Overactive, pert, sleepless, under much pressure, rapid improvement. Not fully recovered, slight insight but on insistence of mother discharged to her care May 12. Did well and seemed normal for two days. Mother developed tonsillitis. Then she became overactive again and returned May 16. She made steady, slow improvement. However, there appeared some bizarre, delusional ideas of sex coloring—belief of pregnancy—of having been married to a college student, H. S., but there had been no physical contact. "God did it." This was transitory and by July 30, she was fully recovered. Residence 100 days. Period of illness same.

Case VI. P. V. C., 26, social worker, college graduate. Admitted May 1, 1934. A previous attack in 1930 while in Harvard. At Boston Psychopathic. Diagnosis: Catatonic Dementia Praecox. Recovered. Continued graduate studies. Took a position as a social worker with T.E.R.A. Winter of 1934 became restless and had some phantasies. Could not rest, went home to another city. There family was advised to have him

admitted to a state hospital There he was quite inaccessible after the first interview Reported to have ideas of reference and to have taken fixed postures Discharged May 1, 1934 Diagnosis D P Catatonic Unimproved Admitted to Twin Elms, May 1, 1934 Showed an expansive state, talkative, dramatic, reciting poetry Very distractible overproductive, resentful towards family for taking him to state hospital later refused to wear his clothes until he had cut off the name tags which the hospital had sewed on Rapid recovery supervened Confidence obtained He ventilated his difficulties easily and readily Discharged May 29, 1934 Residence 29 days Length of illness 79 days Well and working today

Case VII A M F, 20, single, Italian parentage, normal school graduate Admitted June 15, 1934, from her home Mild manic state Rapid recovery with pricks, and neutral baths Psychological ventilation here also was complete Discharged July 20, 1934 Residence 36 days Illness 38 days

Case VIII F C L, jr 27, unemployed Admitted June 21, 1934, from Syracuse Psychopathic Hospital with a diagnosis of Dementia Praecox, paranoid type Oldest of four father a business man Four years at Hobart College Two upsets while at college—January 1930, and again just before midyears, 1931, and was not given a diploma On admission it was found that the onset of the disorder had followed a series of discouragements and an altercation with his father Left home and wandered away At the Psychopathic Hospital he was unproductive, antagonistic, indifferent simple, silly, and had a sense of unreality The family was advised to commit him to a state hospital At Twin Elms he was slow in response and conscious of it Blamed his difficulties upon somatic state, teeth, jaws, sinuses On defensive Blamed the noise at Syracuse Psychopathic Hospital the hard beds (?), the ignorance of the attendants kept him under tension After two days ceased to make somatic complaints and began entering upon the activities arranged Cooperative By July 6 given parole His car was sent to him Full ventilation of his conflicts Discharged July 24, 1934 after a formulation of the situation was given to patient in presence of his parents Residence 34 days Illness 69 days

Case IX E G, 24, single, stenographer and musician Early life uneventful Finished high school at 16 Entered Syracuse University Left because of pneumonia Never returned Took a business course Worked as a stenographer and bookkeeper In the meantime showed exceptional talent

in music Sponsored by a local musical organization for a year's study in New York City The onset of illness thwarted this plan In temperament described as even-tempered and good natured Oversensitive Neither sociable nor seclusive until the last year No love affairs, though popular with boys In November, 1932, the disorder followed fears of losing her position it was said Began to have somatic complaints without medical substantiation Then depression somatic delusional trend, seclusiveness, ideas of influence, disinclination to exert Admitted to Syracuse Psychopathic Hospital, March 15, 1933 Transferred to Marcy State Hospital, June 10, 1933 with a diagnosis of Dementia Praecox, catatonic type There she went through a long period of stupor, i.e., standing long intervals at her bedside, required total care and spoon feeding Following that the hospital notes were as follows "July 14, 1933—receives sodium amylal treatment Slight temporary improvement July 29, 1933—returned from a parole lasting only a few days which satisfied the parents she could not be cared for at home" The later notes all indicated she remained in a "mute, catatonic, resistive, uncooperative" state "January 6, 1935—Catatonic, resistive, no improvement" Transferred to Twin Elms, February 3, 1935 There has gradually supervened after being here steady improvement in behavior, first she began to care for natural functions, then to dress and adorn herself, stopped eating with her hands and fingers and secreting food in bed Gradually after steady effort takes daily baths herself Facial expression has become entirely responsive to situations She smiles, is alert to everything that goes on, and is very curious She assists nurses with routine work She has at intervals returned to her violin and has executed strikingly well However, her interest in this has not revived to former level At times she speaks briefly, more times she whispers under her breath or gestures her responses Still she rarely sits down refuses to wear shoes for days at a time strongly desires to leave the house but when she gets outside there appears blocking or negativistic reaction, though on the first occasion she walked about the grounds occupational studio etc She has now been paroled to her home with a well selected companion to find the full possibilities of convalescence

By these brief but concrete stories, I believe there can have been conveyed to you something of the reality of the benefits to these sick, which we have seen with our own eyes, of those factors earlier referred to There can be no doubt that in

the fluid state of an early psychosis, the close individual touch, the sense of safety conveyed by the "atmosphere" I have spoken of, removes readily the obstacles to good psychiatric approach. These factors I believe, as exemplified in the case histories, shorten the period of illness and even give results that have not been nor cannot be expected in mass control.

And now I wish to come to the important phase of these observations, and by way of introduction to it, let me quote some sentences from a paper of Dr. Pollack's of our Mental Hygiene Department, "Family Care of Mental Patients." (*American Journal Psych.* Vol. 2, p. 331.)

The scientific spirit spurs us on towards the discovery of new and better methods of medical treatment and of more economical and more efficient methods of care.

Necessity also has spurs and is beginning to use them. The ever-present conflict between what we want to do and what we are able to do is growing in intensity and is threatening the mental health of the nation. Taxpayers groan under present burdens and are insistently demanding relief. The problem now before those vested with the care of mental patients is that of maintaining scientific standards while reducing per capita costs.

His paper further advanced the idea of family care for consideration. This proposal was later discussed at last year's Association meeting. The consensus of belief was rather pessimistic for its application in America. But it is evident that something must be done, for the problem is one of the most serious that confronts the social system of today.

From personal experience, and surely all whose experience is similar will support me, we can do more with treatment of mental disorders than we are doing. This is in no sense intended as a criticism of the personnel of our institutions or of their fine efforts. All will acknowl-

edge that we have come far, due to the work in our public institutions. However, this is a challenge to their spirit to again spur them to their task.

The past quarter of a century has been devoted to intensive research into the mechanics, and the understanding of the underlying qualities of mental disorders. It has somewhat supplanted the earlier phase of cataloging and grouping. And yet I fear we are spending, and are compelled to spend, so much effort upon the administration and the cataloging that treatment goes begging for want of attention and fresh energy.

As a constructive suggestion based upon an experience of close to a quarter of a century, I would propose treatment centers in each institution with special personnel, freed from institutional orthodoxy and emancipated from routine of administration and classification, who will give intensive treatment of a personal kind to selected groups, the sort that will incorporate all of the best in modern thought and also the kind that is inspired by personal challenge of the sick patient pleading for help from his only friend in this moment and need,—the doctor.

The admissions service should still function as a classification service and select the cases for the treatment centers, directing and segregating there, those cases offering the greatest need and the greatest promise for such treatment. It would be absurd to imply that all cases coming to a large institution can be benefitted by such a plan. But let's get at those who will be benefitted and get them back home or to convalescence by more intensive methods.

In such a brief offering as this I know that it is only possible to give a shadowy and inadequate idea, without any details of methods or plan. However, if I can sow the germ of the idea on fertile ground I am sure it will grow and develop to fruition.

305 PHYSICIANS BLDG.

Discussion

DR. H. S. GREGORY, *Binghamton State Hospital*—I quite agree with Dr. Boudreau that nursing homes rarely meet the needs of the average private psychiatric patient. They supply a bed and food and that is about all.

One gets the impression from reading

his brief case histories that a change in environment plus the ministrations of a sympathetic nursing staff, coupled with occupational therapy and, of course, therapeutic talks by the physician will often meet the needs of many mildly psychotic cases, who, if caught at the onset of the attack,

will respond promptly and readjust before chronicity claims them. Such an environment, in a private sanitarium, is available to relatively few patients because of economic considerations but an approximate approach to this set of conditions is worth striving for in the larger state institutions.

The proposal that treatment centers be arranged intramurally in large hospitals has been considered by many superintendents, though perhaps not in just the way outlined. Wards set aside for "habit training" purposes are not uncommon but are used largely for the rehabilitation of young schizophrenics whose routine of living has become sadly demoralized. In the Binghamton State Hospital such a ward limited to twenty cases, has functioned for the past eight years and the added expense as to personnel, etc., has been more than justified by the increased recovery rate.

Most hospitals attempt to make the wards of the reception service fulfill the idealistic conditions enumerated by Dr Boudreau and it is, of course, impossible of accomplish-

ment. All classes of patients must of necessity be admitted to such wards, and for a patient of refinement to be constantly associating with other patients of a much lower social level, often unable to speak English, can hardly be designated as "heart-balm" or as the "calming of a tortured soul." For such a person, with nerves on edge, to have to sit at a table in one of our state hospital dining rooms and see her compulsory table companions dipping into the stew with their fingers, is not to be considered good mental therapeutics. Yet we condone such situations and pass them over lightly with the comment that, "This is a public institution and taxes are already too high to permit of catering to any one class of society."

While I do not wish to be considered undemocratic, I must confess to being heartily in sympathy with Dr Boudreau's ideas and am going to continue to look forward to a more humane and sympathetic approach to a selected group of cases in our larger institutions.

HOW STATE MEDICINE WORKS IN AUSTRIA

Ten per cent of Austria's doctors "are totally unemployed and without means of subsistence," according to a special wireless dispatch from Reginald Sweetland to the *Chicago Daily News* Foreign Service, and 20 per cent are trying to live on fees of less than \$30 a month. This is under a regime of state medicine. It seems that of the 8,000 registered medical practitioners 7,000 are able to earn a subsistence wage in examining patients for the State social insurance scheme and Federal clinics. This number is to be reduced by about 4,500 under a new law which virtually closes the door of private medical practice.

Roughly 80 per cent of Austria's 6,000,000 population are beneficiaries in State

social insurance schemes and as such they get practically free medical attention, the State paying but a tip to the doctors qualified by the Government to deal with such State business.

Under the stipulations of the law of 1st April 1, which is now having disastrous effects upon the medical profession, 80 per cent of all Austrians under the social insurance scheme are limited in selecting their own private physicians, since the State pays the medical fees for such patients with the natural result that the Government, in usurping the clientele of private medical practitioners is reducing them to financial despair and destitution.

A suit to dissolve the Life Extension Institute, Inc., of 25 West Forty third Street and to annul its charter on the ground that it is practicing medicine without a license has been begun in the Supreme Court by Attorney General John J. Bennett, Jr., it was disclosed recently. The appointment of a receiver is sought in the suit.

The institute was incorporated in 1913 and has a present capitalization of \$2,000,000, according to the papers in the suit. It maintains a staff of physicians for conducting physical examinations and gives written reports on the results.

The Attorney General contends that this service constitutes practice of medicine. The institute maintains that the reports do not constitute practice of medicine, and that subscribers are always referred to their own physicians for treatment.

A British doctor who wished to pay a call at a cottage near Bracknell, Berks, made inquiries at the local post office. Finding the directions very involved he addressed a sixpenny telegram to the cottage and then accompanied the messenger.

CASE REPORT:

RUPTURE OF UTERUS DURING CURETTAGE WITH EXPULSION OF INTESTINES

RALPH F. WARD, M.D., F.A.C.S., *New York City*
and

HERMAN A. METZ, M.D., F.A.C.S., *New York City*

Case reports of this type in the American surgical literature are not very common. Because of the circumstances under which such accidents occur many, of necessity, must go unreported. In reporting this case, we wish to emphasize the comparative rarity of the lesion, the type of surgical procedure adopted and the remarkably rapid recovery. Following is the history of the patient in chronological order:

J. N., age 23, was brought to the Metropolitan Hospital by ambulance October 8, 1933, at 4:00 P.M. On the night of October 7 she had a fall which initiated vaginal bleeding that continued throughout that night. She had missed one menstrual period due about September 17. The morning of October 8 a midwife had attended her, and attempted a curettage of the uterus. During this procedure the uterus was ruptured and a loop of intestine brought down. Unaware at first of the true nature of the structure she was dealing with, the midwife cut across the loop of intestine. Realizing the seriousness of her error she summoned medical aid. Removal to hospital followed.

On admission the patient was pale, restless and complaining of severe abdominal pain. Temperature was 98.6, pulse 86, respiration 22, blood pressure 130 systolic and 0 diastolic. Vaginal speculum examination revealed what proved to be a severed loop of small intestine. Both limbs were probed and found to have lumina. Otherwise this tissue was stretched, ribbon-like and had no resemblance to intestine. Each of these structures from their point of emergence at the external os of the cervix measured approximately 6 inches in length and a half-inch in width. There was no visible mesenteric attachment. The ends were tied together with a ligature of catgut and vagina packed with iodoform gauze.

Under general anesthesia the abdomen was opened through a suprapubic midline incision. There was no bleeding or apparent soiling of the peritoneal cavity. In Trendelenburg position the abdominal contents were

packed off with hot pads and the uterus exposed to view. A loop of small intestine was seen entering a rent in the posterior superior segment of the uterus. The loop had been pulled down so thoroughly into the vagina that it acted as a cork, plugging the uterine rupture. This was a fortunate occurrence and accounts for the absence of soiling or active bleeding into the free abdominal cavity. During the preliminary exploration the intestinal loop was accidentally pulled out of the uterus. The tied ends were brought out on the abdominal wall and packed off with hot pads. Supravaginal hysterectomy was performed. In this manner a potentially infected organ was removed. End to end anastomosis of the severed loop was then performed after removal of crushed and nonviable gut.

An ileostomy tube was next inserted into the small intestine about one foot proximal to the anastomosis and brought out through a stab wound in the left rectus area. The ileostomy was to serve to divert the fecal stream and allow a better chance of healing of the anastomosed ends of intestine, as an outlet for gases and intestinal material and to avoid the development of ileus. The lower pelvic cavity was drained using two cigarette drains in the event the peritoneum had been soiled and infected during the operative procedure. Transfusion of whole blood was given immediately following closure of the abdomen.

Large quantities of fluid were given daily thereafter by intravenous and subcutaneous methods. For several days the postoperative course was stormy. A Levine tube was kept in the stomach on account of dilatation and frequent vomiting. The ileostomy tube functioned well from the beginning, loosened and fell out on the sixth day. Feces continued draining through this fistulous opening for another week. Bowel movements began on the seventh day. The patient was out of bed on the seventeenth postoperative day and home on the twenty-first. When seen five months after operation she had gained 10 pounds in weight, bowels were moving daily, and the abdominal wound was healed.

15 EAST 48TH STREET

SPECIAL ARTICLE

HOW PSYCHIATRIC SERVICES ARE BEING UTILIZED BY SCHOOLS OF NEW YORK STATE

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The following suggestions have been formulated, in the main, for school physicians with the confidence that they will be of assistance to them in rendering better total health service to school children. But teacher and student teacher, physical educator, nurse, attendance officer, guidance worker, visiting teacher and other school and college personnel may also benefit from critical evaluation and espousal of the concepts and recommendations presented.

Fundamental Concepts of Mental Health

The concept of health is in need of enlargement in order that the total health of the child will be kept in mind. It must be recognized that the individual reacts as a total unit and that things mental cannot be separated in reality from things physical since they are both part and parcel of the same organismic function. Anything which disturbs one component of the personality may have its repercussion in some other part. Psyche and soma must always be studied together.

It should be kept in mind that behavior is an integral aspect and expression of health, just as health is expressed in varying types of behavior. The latter should be regarded as a symptom of the individual striving to obtain satisfactions. When reasonable happiness and joy in adjusting to life are denied the child, he protests the situation by "nerves" or varying degrees of behavior and personality maladjustments. It is therefore incumbent upon the physician to know the facts of the child's mental and emotional life in order that he may understand the causes operating in the child's denial of satisfactions in twenty-four hour living. Just as important as the knowledge of facts of nutrition, appetite, weight, heart and lung functioning and other criteria

of physical efficiency, are the facts of the child's mental strivings and abilities. For example, we must know the child's mental age, gained by knowledge of the individual's life history in terms of developmental progress, social adjustments, school record and intelligence tests.

Frequently "nerves" or behavior difficulties are chiefly due to emotional strain caused by the child failing to gain satisfaction in school work because more is expected of him than he can meet with reasonable effort in the light of his intellectual capacity. Other frequent causes of maladjustments in school children are emotional conflicts causing strain because of unhappy home life, lack of home supervision and guidance, influence of unwholesome associates, educational factors contributing to failure in gaining social approval and recognition which contributes to reasonable prestige, denial of sense of belonging to the group, feelings of insecurity, and lack of freedom and opportunity to unfold his creative interests and abilities.

Cooperation, Understanding and Treatment

The school physician can learn much about the mental health of each pupil, if he will obligate himself to cooperate with the teachers in talking over successes and satisfactions of each pupil in adjusting to the curriculum and to his playmates. Since the teacher is in intimate personal contact with the child some five hours each day, she is in a strategic position to recognize early unwholesome behavior and personality reactions and to ascertain their causes. These in turn may be discussed to mutual advantage by teacher and physician.

Seek for Multiple Causes to Interpret Behavior. Behavior is in need of interpretation rather than judgment. If chil-

dren are to be happily adjusted to the school, to their fellow pupils, and to the home, we must find out the combination of causes or variables which contribute to unhappiness. Most maladjustments are essentially due to emotional dislocations, thwartings of desires, or arrests in emotional-social development.

Mental retardation in itself is not the cause of unhappiness or warped social integration, if we keep in mind the child's limitations and shape our program and expectations in keeping with his capacity to experience reasonable successes, a sense of achievement, and social approval or recognition.

Time Needed

The essential aspects of the mental life of a child can only be revealed by taking the time to win his confidence sufficiently for him to lay bare his wishes, longings, desires, strivings, successes and failures, disappointments and frustrations, ambitions and to what extent they are being realized in keeping with his capabilities and opportunities. The child's fears, anxieties and mood disturbances can only be appreciated by knowing the facts of the social environment which affect him positively or adversely in terms of life satisfactions.

Obviously the school physician himself has not time to gain all of the essential facts of each child's life history which are necessary to interpret inadequacies of adjustment and personality twists. Cooperation with the teacher, the parents, community agencies and other social contacts which cut in upon the child's twenty-four-hour living is essential.

The first line of defense in an organized mental health program is the classroom teacher, both from the standpoint of correction of maladjustments as well as from their early recognition and prevention. Her potential and actual contribution to the child's experience can be a most fruitful one in positive mental hygiene education. The aim is not only to maintain "normality" but also to develop each child's constructive potentialities to the optimum.

However, the full realization of these objectives will not be brought about until adequate cooperation is obtained from the parents and various individuals with

whom the child has intimate contact. Although the reading of well-chosen literature and courses in psychiatry and child guidance are helpful, the most fruitful source of knowledge comes by working with the child himself, applying what mental hygiene principles and practices can be gleaned from psychiatric literature as well as from clinical experience, co-operating with the classroom teacher, the physical education teacher, club associates and particularly the parents.

The starting point for the reconstruction program is recognition of the child's strengths, i. e., those things which bring him satisfaction. If we show each child to advantage on his own level of capacity to succeed, the negative aspects of behavior and personality deviations will recede into the background and disappear.

Specialist Often Needed

The latent potentialities of the school physician are manifold in capitalizing the mental health of each child. However, as is the case in all branches of general medicine, the services of the expert or specialist are required at times. It is important that the school physician recognize his limitations in the understanding and treatment of maladjusted pupils and that he get into the habit of referring such children to Child Guidance Clinics, Psychiatric Dispensaries in connection with hospitals or Health Centers, or to the psychiatrist in private practice.

Services of Department of Mental Hygiene

The New York State Department of Mental Hygiene offers its free services to school children in the form of its Child Guidance Clinics, Psychiatric and Psychological services available to schools throughout the State.

It is important that each school physician, as well as the school nurse, teacher, principal, and superintendent be aware of the location and clinic dates of the Child Guidance Clinic serving their school area. Each school should have its name placed upon the mailing list of the State Department of Mental Hygiene for a copy of "*Monthly Child Guidance Clinic Schedule*." The *Permanent Child Guidance Clinic Schedule* listing clinic location with fixed dates may also be obtained

upon application to the above Department. This schedule notes the place of meeting, its date of meeting, the psychiatrist in charge (who also checks up on the physical and neurological facts of each case) and the psychologist who does the required mental testing relative to intelligence, educational abilities and disabilities, aptitude, and other desirable test information. Each school should also have available the name of the "Field Agent" who is the local person making appointments for children to be examined at the Child Guidance Clinic. (The name and address of this worker may be had by writing to the State Department of Mental Hygiene.) In order that more children may not be taken to the clinic than can be adequately examined,* it is essential that the Field Agent be notified in advance of all persons desirous of clinic services. In other words, a definite appointment is necessary.

Special Class Intelligence Tests

The State Department of Mental Hygiene also provides psychologists for making intelligence tests of children who might be considered candidates for a special class because of varying degrees of mental retardation. The names of such children should be sent to the State Department of Mental Hygiene in order that a mutually convenient time may be arranged with the school for individual testing of a number of such children at one visit.

Exemption of Pupils from School

All children thought to be in need of exemption from school because of mental abnormality should have the advantage of an examination by a Child Guidance Clinic, where the psychological as well as the psychiatric and environmental facts of the case can be obtained and adequately evaluated by experts. The psychiatrist of the clinic will be glad to recommend exemptions and fill out the required forms of the State Department of Education. Frequently, children can be saved exemption from school by having the facts of

the case analyzed and interpreted by the personnel of the Child Guidance Clinic. They stand ready to cooperate with the school physician and other members of the school personnel, as well as the parents and family physician in serving the best interests of all children referred to them.

Children who are making unsatisfactory progress in school, who have personality difficulties or disciplinary problems, or for any reason seem to be misfit socially or educationally, are suitable candidates for examination at a Child Guidance Clinic. A child with speech defects can often be helped to unravel the various causes which may be operating. This may lead to the recommendation of educational, physical, social and psychological treatment which makes for the correction or improvement of various types of speech difficulty.

Whenever simple means fail to bring about readjustment, the services of more experienced and specialist type should be sought. Thus, early cases of maladjustment, which uncorrected may lead to delinquency and criminal behavior as well as to school failure, may be prevented.

Social workers and county agents may refer children to a Child Guidance Clinic for mental examination prior to placement or adoption. County and Children's Court Judges also utilize this type of service for advice and examination facts prior to commitment to an institution or other disposition. Children handicapped with physical defects which are associated with educational difficulties or social maladjustments should likewise have the advantage of this type of service.

Obtain "History" of Child

Before a child is sent to a Child Guidance Clinic, the school nurse, visiting teacher or field agent should obtain the requested facts of the history of the child. Copies of "Case History" form which contains suggestions for guidance in obtaining this information may be obtained upon application to the State Department of Mental Hygiene. This Department also furnishes the booklet "Child Guidance Clinics" describing their purpose and functioning; also eighteen leaflets and several booklets on mental hy-

* Only five or six new cases are usually examined by a Child Guidance Clinic in a single day. Follow-up service and advice is also given to pupils formerly seen at the Clinic.

giene subjects which should be of decided value to the school physician and other members of the school staff. These forms and booklets are furnished free of charge.

School physicians are urged to become thoroughly acquainted with and fully utilize the services of local psychiatric facilities, the Child Guidance Clinics, Psychiatric, Psychological, Social Worker and other special facilities and advice available through the New York State Department of Mental Hygiene.

In the event that there still is need of further psychiatric service by way of consultation, clinic or psychiatric education, the school physician should feel free to seek the assistance of the Psychiatrist of the State Education Department. Although his chief function is educational from the preventive psychiatric or mental hygiene angle, working for the most part with the classroom and student teacher, yet school physicians, school nurses, educational and vocational guidance workers, visiting teachers or psychiatric social workers, attendance officers, parental educators, psychologists, school administrators and other school personnel may also profit by the State Education Department Psychiatric Services in the event that the local psychiatric clinical, advisory or educational facilities available have been first exhausted or have proven inadequate for any reason.

Psychiatric Services to Teachers

Psychiatric services to teachers include discussion conferences and lectures on behavior, personality, emotional, social or educational problems presented by pupils, illustration of various methods of interpreting and handling pupil maladjustments, consultation service relative to individual pupil or teacher problems, panel discussions, and parent-teacher education meetings.

Literature

The school physician's attention is called to two free publications which may be had upon application to the State Department of Education: "*Examination of the So-called Bad or Nervous Child*" and "*Methodology in the Formulation of Mental Hygiene Case Studies*." A third booklet, "*Outlines of Personality Analysis and Reconstruction*," formerly published by the State Education Department, may now be obtained in a revised edition at cost price of ten cents from The National Child Welfare Association, 70 Fifth Avenue, New York City. These publications are of particular interest and service to the physician. The classroom teacher, student teacher, supervisor, school nurse and administrator also may utilize to good advantage the information and suggestions contained therein.

Special Literature

Anderson, V. V.: *Psychiatry in Education*, Harper, New York, 1932, \$4.00.

Basset, Clara: *The School and Mental Health*, Commonwealth Fund, New York, (41 East 57 St.) 1933, 40 cents.

Behavior Problems of School Children, National Committee for Mental Hygiene, 1931, 15 cents.

Cameron, H. C.: *The Nervous Child at School*, Oxford University Press, New York, 1935, \$1.75.

Crawford, N. A., and Menninger, K. A.: *Healthy Minded Child*, Coward McCann, New York, 1930, \$1.75.

Hartwell, S. W.: *Fifty-five Bad Boys*, Knopf, New York, 1931, \$3.50.

Howard, F. E., and Patry, F. L.: *Mental Hygiene, Its Principles and Practice*, Harpers, New York, 1935, \$3.50—Text Bk. ed. \$2.75.

Kanner, Leo: *Child Psychiatry*, Thomas, Baltimore, 1935, \$6.00.

Mental Hygiene in the Classroom, National Committee for Mental Hygiene, New York, (50 West 50 St.) 1931, 15 cents.

Nudd, H. W.: *The Purpose and Scope of Visiting Teacher Work*, Commonwealth Fund, New York, 1935, 15 cents.

Sachs, Bernard: *Normal Child*, Hoeber, New York, 1931, \$1.50.

Sherman, Mandel: *Mental Hygiene and Education*, Longmans, Green, New York, 1934, \$2.25.

Stevenson, George: *Organizing for a Child Guidance Clinic*, Commonwealth Fund, New York, 1935, 10 cents.

Symonds, P. M.: *Mental Hygiene of the School Child*, Macmillan, New York, 1934, \$1.50.

Thom, D. A.: *Everyday Problems of the Everyday Child*, Appleton, New York, 1927, \$2.50.

Thom, D. A.: *Normal Youth and Its Everyday Problems*, Appleton, New York, 1932, \$2.50—Educ. ed., \$2.25.

Thom, D. A.: *Guiding the Adolescent*, Government Printing Office, Washington, D. C., 1935, 10 cents.

NEW YORK STATE JOURNAL OF MEDICINE

Published Semi Monthly under the Auspices of the Journal Management Committee

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EDITORIALS

A Posse ad Esse

At the time when the report of the Wilbur Committee on the Study of the Costs of Medical Care was made public and was studied by the Booth Committee, set up by our Society, the first impression of all who studied the arguments enunciated by the Wilbur Committee was that the scheme would not work in this country. Medicine has battled the reactions which have ensued from the arguments advanced by the proponents of schemes which on one hand sought to bring about state medicine and on the other, to bring about a compulsory form of health insurance.

It is refreshing that there comes now from sources other than organized medicine thoughtful critiques which throw doubt on both the feasibility and the workability of not only these schemes but others proposed for the "betterment of mankind" in general and our people in this country in particular.

Thus, Robert Moses, in his article in the *Saturday Evening Post* of October twelfth, states

Let us assume that all the measures instituted and proposed by the national administration all the projects of the New Deal in their last implications, and all the corresponding and collateral changes advo-

cated locally in states and municipalities by its adherents are sound in principle and in the permanent interest of the average citizen, that they are the just due of the forgotten man, and even that they represent a perfect union of profound wisdom and inspired statesmanship * * * If all these assumptions are made, I still believe that the program sought to be imposed upon us is impractical because no government of ours can do it. It simply cannot be made to work. Our background and traditions are wholly against it. We have no experience and no standards to sustain it * * * A hundred or two hundred years from now the story may be different, but not within the lifetime of the youngest prospective voter now living.

In our arguments against the impracticability and non workability of the various schemes which organized medicine has opposed, the above quotation furnishes potent reasons which have always been the fundamental basis of our opposition to them. We have also always held that in this country, trained as we are as individualists, the best men in the profession would never join these schemes, and Mr Moses adds a trenchant observation to this and similar situations when he says "It is obvious that no matter how sound a program may be in theory, it is bound to fail if the administration brains

and personnel cannot be found, and the methods cannot be devised to make it work. * * * There is no well established tradition of competent, honest and enterprising public service in this country today, and there is no likelihood of establishing it on the gigantic scale now contemplated within any reasonable time."

These truisms, which must be apparent to any student of the American political scene, are not given enough serious and thoughtful consideration. In spite of them there comes from the adytum of the social reformers views which bring to mind the critical analysis of quackery in modern political and intellectual life recently made by Leonard Woolf, in which he points out that the effects of a false belief tenaciously held are often more powerful and devastating than those of true beliefs.

For the time being let us lay aside these arguments and look at the question from another standpoint. How will our wage-earners fare under the egis of the proposed change? We look in vain for that Labor Leader who is conscious of the narcotizing effect which these plans will have upon the laboring classes which tends to fix the worker permanently in a given income bracket, and prevent him from improving his position, and his station in life. The wage-earner gets less wages because he receives cheap medical service rather than so adequate a wage for his labor that he may, among other things, purchase the medical care he needs and wants.

It is a sad commentary on the course of events in our times and in this controversy to lose intellectual integrity in discussion. It is too evident that despite truths, false views are still promoted to the sanctity of absolute truths and labor is not yet awake to the dangers which threaten it. The organized medical profession is not battling for its own interests alone, because medicine in itself is the greatest social service in the community. It is concerned as much with the public welfare and what will happen to this, as it is in its own status.

Boon-Doggling

We are indebted to the Chairman of the Sub-Committee on Deafness and Hard of Hearing of the Public Health Committee of the Medical Society of the County of Monroe for bringing the following project, proposed by the WPA, to our attention.

This calls for a survey of deaf children of that county of pre-school age, sponsored by the Monroe County Regional Planning Board in connection with studies being made at the estimated cost of \$10,440, Monroe County to pay toward this project \$1,390. A study of this project reveals that it has no utility value. It presupposes subsequent training of the deaf child for which no provision is made in the project at all; and its value is emphatically questioned by prominent educators.

Since it is impossible to detect deaf children before the age of three years and since the public and special schools take them over at five years of age, the whole project is limited to those between the ages of three and five years. The prospectus which is drawn up about this survey states that the County of Monroe contains sixty of these children. Other evidence from the head of the Bureau for Handicapped Children in the New York State Education Department at Albany accounts for only fourteen of such, exclusive of those already in the Averill Avenue Nursery. Hence, it is intended to spend \$10,400 to survey these twelve or fourteen children.

The project is an unwarranted intrusion into a medical and educational problem by sponsors who are not certified as competent by either medical or educational authorities. It would seem that further comment would be unnecessary; and the Executive Committee of the State Society has gone on record as supporting the protest of Monroe County against this unwarranted project which adds to the taxpayer's burden and which is of no health value whatsoever. In times of great depression, such as we are

living through, it would hardly seem possible that funds could be wasted upon so futile a project

Malpractice Insurance

Considerable unrest is apparent in the ranks of our profession anent the ensuing change in insurance carrier from the Aetna to the Yorkshire Indemnity Co.

Suffice it here to re state that the financial responsibility of the Yorkshire Indemnity Company has been subjected to a searching study and has been found adequate. The officials of our Society, having this matter in hand, have found ample security is afforded our members who will become policy holders with the new carrier.

To the confusion produced in the minds of the members by the change there has been added the activities of local insurance agents who are naturally interested parties seeking to retain business and who, in some instances, seem to have activated objections and objectors to the change in carrier. The Society's insurance representative, Mr. Wamvig, is available to county organizations for information and other related service.

Before hastily conceived objections are raised, would it not be well to be properly informed from authoritative sources?

Every Vote Counts

The elections to be held on November fifth will go far to determine the complexion of the next State Legislature. Many people forfeit their votes in these off years because of the general absence of sensational campaigning and the fact that no high executive office is involved. To any one who stands to be influenced by legislative action, however, the caliber and views of the candidates up for election next week are of the utmost importance. Physicians fall within this class.

There seems little doubt that compulsory health insurance will come before the State Legislature in January. If it is incorporated in the federal program for

economic security, the latter will be submitted for ratification. If not, the forces that have sponsored similar legislation locally in the past will undoubtedly act again on their own initiative.

This is not the only measure of professional import which crops up each year. Every session witnesses new attempts to expand the list of presumptive occupational diseases. Osteopaths demand privileges beyond the scope of their training, lay physiotherapy technicians attempt to shake off necessary restrictions on their freedom of action, and various public departments seek to encroach on private medical practice. On the other side of the picture, physicians are deeply interested in legislation to safeguard their professional independence, secure the economic status of medicine and advance the public health.

Most of the men who are up for election have been in the public eye before and, by past actions, have demonstrated whether the interests of scientific medicine may safely be entrusted to their hands. Those seeking office for the first time cannot put themselves on record too soon on questions vitally affecting medical practice and the public health. Every doctor should vote at the coming election—and before voting should ascertain the views of the candidates for whom he proposes to cast his ballot on all important professional issues.

Possible Opportunities

A recent issue of the *NEW YORK STATE JOURNAL OF MEDICINE* reprinted some of the results of a "location survey" conducted by *Medical Economics*. They reveal that seven towns in New York State with more than a thousand inhabitants each have no physicians. These are Colonie, with a population of 1176, Great Neck Estates, with 1738, Hillburn, with 1303, North Pelham, with 4890, South Nyack, with 2212, Stewart Manor, with 1291, and West Carthage, with 1722.

In Irondequoit Town, the proportion is 6008 persons to every physician, in

New York Mills 4006 and in Sloan 3482. Three communities.—East Rockaway, Elmira Heights and South Glens Falls—have one doctor to every twenty-one to twenty-seven hundred of population. In Port Dickinson and Solvey the ratio is over nineteen hundred to one and in Yorkville over 1700. Three more towns—Green Island, Rensselaer and Scotia—follow up closely with over 1400 of population to each practitioner. Depew, Dunkirk, East Rochester, Massena and Watervliet are next with 1300 and more; while Lackawanna, Little Falls and North Tonawanda top twelve hundred, eleven hundred and a thousand respectively.

If these figures are correct, they are an impressive argument for better distribution of physicians in this state. The average ratio of practitioners to population in the United States is one to 866. The great disproportion in the twenty-eight towns cited by *Medical Economics* suggests that unless some special condition prevails these localities would benefit by an increase in the percentage of physicians and there is an opportunity for a limited number of medical men to build up a practice in communities that need more doctors.

In a number of small towns throughout the country that formerly had no physicians—notably Ogema, Wisconsin—practitioners have been able to earn a good livelihood by securing retainers from a sufficient number of families to guarantee at least minimum expenses. Statistics rarely tell the whole story and the figures elicited by *Medical Economics'* "location survey" may mask peculiar circumstances—but the towns mentioned appear to hold out at least a promise to any one interested enough to investigate.

Whooping Cough

Since the inception in 1906 of attempts to produce an active immunity against whooping cough, the literature has abounded with reports from pediatricians and epidemiologists concerning the feasibility of vaccination for the prevention of

pertussis. From the reading of these published reports, one is impressed by the marked discrepancies which exist among the various observers. These are due, perhaps, to the fact that until recently no standard of comparison has existed. Different investigators used the vaccine at different times in relation to the onset of the disease. Another factor which precludes a comparison of results is the varying dosage employed in experimental observations. Then again, the vaccine was employed by some of the investigators in age groups which differed from those used by others engaged in the study of the same problem. By far the most important factor, however, has been the use of vaccines made from cultures of *B. pertussis* without regard to the age of the culture. The significance of utilizing a vaccine made from an old culture or from one just recently isolated has been stressed only in the recent literature.¹

The investigation of the problem has been handicapped further by the doubt which has been cast upon the specificity of the *B. pertussis* as the cause of whooping cough. McCordock and Muckenfuss² suggest the possibility of a filterable virus as the direct etiological factor, but the fact that the *B. pertussis* is found in all cases of whooping cough while not recoverable in the absence of the disease would tend to discredit this view.¹ Furthermore, the ability to reproduce whooping cough in animals³ and in children⁴ by using *B. pertussis* affords presumptive evidence of the causative role played by this organism.

The lull in the study of this problem

¹ Kendrick, P., and Eldering, G.: Significance of Bacteriological Methods in Diagnosis and Control of Whooping Cough, *Am. J. Public Health*, Vol. 25, P. 147, Feb. 1935.

² McCordock, H. A., and Muckenfuss, R. S.: The Similarity of Virus Pneumonia in Animals to Epidemic Influenza and Interstitial Bronchopneumonia in Man, *Am. J. Path.*, Vol. 9, P. 221, 1933.

³ Sauer, L. W. and Hambrecht, L.: Experimental Whooping Cough, *Am. J. Dis. Child.*, Vol. 37, P. 732, 1929.

⁴ MacDonald, H., and MacDonald, E. J.: Experimental Pertussis, *J. Infec. Dis.*, Vol. 53, P. 328, 1933.

has been replaced lately by a renewed interest, due largely to the more recently acquired knowledge of the antigenicity of the cultures utilized and to the more favorable results which have been reported by Madsen⁵ and Sauer⁶. At the present time, no definite evaluation of the efficacy of vaccination against whooping cough is possible. A reinvestigation of the entire subject is needed and careful controls and prolonged study will be required before any appraisal can be made of its practical applicability.

Operability of Gastric Carcinoma

To most laymen and to many physicians, carcinoma of the stomach presents a hopeless outlook from both a therapeutic and prognostic viewpoint. Certainly, the statistical compilation of the American Society for the Control of Cancer, which revealed that gastric and duodenal carcinoma was responsible for twenty two per cent of the 115,256 reported deaths from cancer for the year 1930¹ would tend, at first glance, to support this pessimistic attitude. On closer analysis of these figures, however, they indicate merely the high incidence of cancer located in the stomach and consequently are not intended to be used as a prop for despair.

The fatality of gastric carcinoma to no small degree is dependent upon the difficulties encountered in recognizing the lesion before it becomes inoperable. That other factors play an important part in prognosis is admitted by all concerned in the study of this subject. In the main, however, the high percentage of deaths resulting from carcinoma of the stomach has been due to the low index of opera-

bility hitherto existent. Reports show a wide variation in the percentage of operability, ranging from 30%² to 70%³. All observers, in the discussion of this phase of gastric malignancy, confine their statistics to those cases which lend themselves to curative as contrasted with palliative surgery. Thus Hunt¹ speaking in terms of gastric resection, states that, of the cases which have come under his observation, 36.2% were operable.

The low figures reported, therefore, are the result of conditions beyond the control of surgery. Despite the high degree of accuracy attained in the detection of carcinoma of the stomach, early diagnosis at times is extremely difficult. In many instances the lesion, when recognized, has advanced beyond the stage of operability. Many cases of gastric carcinoma present clinical manifestations of inoperability when seen for the first time. Lesions of the cardia or of the upper lesser curvature are considered as inoperable by many observers. These are some of the factors which decrease the index of operability for cancer of the stomach.

The outlook for the future is nevertheless a favorable one. Not only does there appear to be a definite tendency toward the achievement of a higher operability but the curability of the disease also shows an upward trend. Gatewood⁴ reports that, of his operable cases, 39.5% are alive after five years. The intensive campaign of instruction which has made the public more and more alert to the importance of trivial gastric symptoms, has brought many more sufferers to the operating table in the earliest stages of carcinoma of the stomach. The increase in the percentage of operability goes hand in hand with the prolongation and saving of life and the continuance, even

⁵ Madsen, T. Vaccination against Whooping Cough, *JAMA*, Vol 101, P 187, July 15, 1933.

⁶ Sauer, L. W. Whooping Cough. A Study in Immunization, *JAMA*, Vol 100, P 239, Jan 28 1933.

¹ Hunt, V. C. Operability of Carcinoma of the Stomach, *Ann Surg*, Vol 101, P 1200, 1935.

² Maes, W. Boyce, F. F. and McFetridge, E. M. The Tragedy of Gastric Carcinoma, *Ann Surg*, Vol 98, P 619, 1933.

³ Lahey, F. H. Carcinoma of the Stomach, *New Eng J Med*, P 59, Jan 11, 1934.

⁴ Gatewood. Prognosis in Gastric Carcinoma Treated by Resection, *Surg, Gyn, and Obs*, Vol 56, P 442, 1933.

the intensification, of propaganda directed toward making the public and the profession "cancer conscious," will go far toward augmenting the advance thus far attained.

CURRENT COMMENT

MR. ROBERT MOSES, in the *Saturday Evening Post* of October twelfth, says, "If a choice must be made between an economic and a political sycophant, the political sycophant is probably the less dangerous of the two. He is more likely to give the public a break between elections, and less likely to corrupt the text of official reports."

FROM THE ADDRESS of Mrs. Rogers N. Herbert, President of the Womans' Auxiliary of the A.M.A., we cull "What is the major objective of the Womans' Auxiliary? * * * To interpret intelligently to the laity the great underlying purposes of the A.M.A."

IN THE *Journal of the American Medical Association* of October 19th, commenting on the trend in development in public health service, the *Journal* says that "For years both physicians and public health officials have urged greater appropriations for public health. They now find themselves in the position of a starving man suddenly seated at a ten-course banquet. There is too much food for possible digestion and the end result is certain to be a 'stomach ache.' It is no secret that health officers in high positions are in a dilemma as to the disposition of the money now to be showered on them. Neither the personnel nor the projects have been developed for suitable spending of these appropriations. The announcement has been made that a survey of 750,000 families is to be conducted by the United States Public Health Service to determine the status of their health and the care given to them in disease. Yet the opinion has already been ventured by the assistant secretary of the treasury in charge of the United States Public Health Service that the answer to this survey is apparent." If the answer is already available, why make a survey? We have commented editorially last month on the fact that this survey probably was eventually to furnish propaganda based on a theory that a large proportion of our population is not receiving adequate medical care. We very much fear that our surmises are going to prove to be correct.

EDITORIALLY, the *Journal of the American Medical Association* of October 19th, in its discussion of the debate on state medicine,

brings the illuminating information that the Ninth Annual Debate Handbook, edited by Bower Aly, indicates that the American College of Surgeons favors compulsory sickness insurance, notwithstanding the fact that the governors of the college have specifically denied this allegation. In justice to the many members of the college, this denial should be made more emphatic so that nobody misunderstands the position of the college.

IN THE SAME EDITORIAL it is stated that "President Roosevelt has said, at least so Mr. Moley affirms, that there will be no attempt at a program of compulsory health insurance until public sentiment has crystallized in that direction." There does not seem to be much evidence of crystallization except from certain interested quarters.

Medical Week of October 19th, editorially discussing support for graduate education, quotes Dr. Willard C. Rappleye, Dean of the College of Physicians and Surgeons of Columbia University, "the annual budget of the medical schools of the United States totals more than eleven million dollars, about a third of which is provided by student fees. Less than three per cent of the entire amount is allotted to graduate instruction. If the latter 'is to be placed on a proper educational level, more financial support for university programs in this field will have to be secured.' * * * Philanthropists interested in elevating the standards of medical care could accomplish a great deal by diverting to graduate medical education some of the funds now trickling away in sentimental and theoretical movements. * * * Quoting Dr. Rappleye again, 'The great need of the country is for better, not more physicians and for opportunities by which those in practice and those who are qualified to specialize may be able to prepare themselves adequately, for their responsibility to the public.'"

PRESIDENT GEORGE BARTON CUTTEN of Colgate University recently issued a provocative thought when he said that "I have attended religious gatherings—some of a national character. I have even been to prayer meeting—an outworn and mid-Victorian custom—but I have yet to hear from pulpit or pew a person who prayed, 'Lord give us more hard times!' Yet, if the God of nature and the God of the Church are the same, He has been trying to teach us since cons before the dawn of history that hard times are the hotbed of progress, and easy times are the harbingers of degeneration and downfall." In brief, he holds that competition is necessary for progress because a man really must be kicked upstairs.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked by rule. All communications must carry the writer's full name and address which will be omitted on publication if desired. Anonymous letters will be disregarded.]

To the Editor

There are 62 counties in New York State. There are 60 County Medical Societies in New York State, but Putnam County, having separated from Dutchess County, there will soon be 61 County Medical Societies.

As Organizing President of the Woman's Auxiliary to the Medical Society of the State of New York, I sent out on August first, 57 letters to the presidents of the County Medical Societies in which there are no Woman's Auxiliaries. In these letters, I asked for the permission and cooperation of the Medical Societies to organize a Woman's Auxiliary to each County Medical Society.

At present date, October 14, I have had responses from 15 counties. Many have been very enthusiastic, a few have been only slightly interested but none have been entirely opposed. I am still hopeful that I shall hear from the remaining counties at an early date.

There is no better way for me to bring to your attention the aims and purposes of a Woman's Auxiliary, than to quote from the splendid inaugural address of Mrs. Rogers N. Herbert, President of the Woman's Auxiliary to the American Medical Association.

Mrs. Herbert stressed the importance of the latent potentialities of the Woman's Auxiliary to the American Medical Association, and said that the major objective of the Woman's Auxiliary is to interpret intelligently to the laity the great underlying purpose of the American Medical Association and that the problem of *how* is to be solved by the Auxiliary, as guided by the Advisory Council.

She spoke of yearly changed conditions and new attitudes toward the medical profession. To quote:

It is our inalienable right as the biological helpmates of that great body of men, who are giving their life, their time, their all to the noblest of all professions, medical science, that we should uphold their hands and assist them in perfecting their chief purpose—that of promoting a great Health Program. * * * The State and County Auxiliaries are the only mediums by which the National can function effectively.

To quote further:

Today, throughout the world we are witnessing the entrance of woman into every post of service for her country. * * * the largest

body of women, General Federation of Women's Clubs encircling the world with its splendid educational opportunities has included in its broad curriculum the study of Health * * * the most vital subject of the entire Auxiliary program, since it relates and integrates every phase of life—living. Health education is fighting to hold the gains it has made. * * *

The President called upon Auxiliary workers to make a greater effort to cooperate with other organizations that they may sound the alarm in calling attention to the crisis in Health Education. She emphasized that in matters of legislation, touching the medical profession, not only physicians' wives but every woman should be informed, that it is of vital importance that the workers of each state should know the legislation of that particular state as touching this important subject.

On Public Welfare, she said:

For the past few years, Public Welfare has played such an important part in community interests, that no woman can afford to lag behind.

She stated further that through the daily press, periodicals and radio, the mind of the Public was being informed concerning Medical Science and that the Auxiliary members should keep so well informed that they will readily recognize whether the lay mind is being *informed* or *misinformed*.

Finally she asserted:

It is incumbent upon the Auxiliary woman * * * to bring about a spirit of cooperation between the Medical Profession, Social Agencies, Public Health Department, and the laity.

Then again she stressed that for the solution of any problem the Advisory Council, both State and County, should be consulted not only as a matter of Auxiliary ethics, but of wisdom and safety.

Mrs. Herbert concluded her address with:

Facing the dawn of a new Auxiliary year, let us remember that *Behind us is Infinite Power. Before us is endless possibility, Around us is boundless effort.*

It was my privilege to hear Mrs. Herbert address the Convention last June in Atlantic City. I assure you the hundreds of Auxiliary members were inspired, and the State presidents accepted the challenge.

MRS. JOHN L. BAUER

Organizing President of the Woman's Auxiliary to the Medical Society of the State of New York

Society Activities

Executive Committee Proceedings.

Action was taken by the Executive Committee at its regular meeting on October 10, 1935, on three matters that merit the attention of the membership.

In accordance with a request of Dr. Olin West, Secretary of the American Medical Association, it was decided to advise all members to read in the October 5, 1935 issue of the *Journal of The American Medical Association* an article "The New Health Survey" on page 1127 and the editorial on page 1121 which also refers to the subject.

* * *

In connection with queries on the change in arrangements for group malpractice insurance the following resolutions were adopted:

That the members of the Society be informed of the details of their malpractice insurance by publication in the State Journal of a chronological sketch of events which led up to the change of carrier and the additional advantages enjoyed by the profession under the new policy.

That a statement of financial responsibility of the Yorkshire be published together with the rating from Best's manual.

That Mr. Wanvig make himself available to any component County Society desiring a discussion of malpractice insurance upon request.

* * *

From the Medical Society of the County of Monroe was received word of a protest against a W. P. A. project in that county, coupled with a request for approval by the State Society. The following letter explains the situation:

September 27, 1935

Dr. Robert G. Hoffman
District Director W. P. A.
1460 South Avenue,
Rochester, New York.

Dear Mr. Hoffman:

As Chairman of the Sub-Committee on Deafness and Hard of Hearing of the Public Health Committee of the Medical Society of the County of Monroe, I wish to file formal protest, in the name of the Society, against the proposed W. P. A. project, calling for a "Survey of deaf children of the County of pre-school age, a project sponsored by the Monroe County Regional Planning Board in Connection with studies being made at an estimated cost of \$10,440 with the County to pay \$1,390."

We protest this project for the following reasons:

First: The survey in and of itself has no utility value. It presupposes subsequent training of the deaf child for which no provision is made within this particular project and the value of which is emphatically questioned by prominent educators in this field.

Second: An unwarranted expenditure is proposed for a project of questionable value. Since it is almost impossible to detect deaf children before three years of age, and since the public or special schools take them over at five years of age, the whole operative field is limited within the ages of three to five. The prospectus for this project states that there are within the County of Monroe some sixty of these children. According to Mr. Joseph M. Enders, Head of the Bureau for Handicapped Children in the New York State Education Department at Albany, there are probably within the County twelve to fourteen of such children, exclusive of the seven now in the Averill Avenue Nursery for pre-school deaf children. The sum of \$10,400 is to be spent to detect these twelve to fourteen children. (The prospectus says sixty.)

Third: In another two or three years the findings of the proposed survey will be obsolete and useless. These children will have passed on into the public school age, and the newborn deaf children will again have to be detected at the rate of \$10,400 for twelve to fourteen children. (The prospectus says sixty.)

Unless some scheme for the continuous detection of such children as they become three years of age could be worked out, there is no permanent value in such a project nor does it have any justification.

Fourth: It is common knowledge among otologists (ear specialists) that such an investigation is neither desired nor will be welcomed by those most vitally interested, namely, the parents of the congenitally deaf. Parents often shield and protect these children from inquiring and investigating individuals as long as possible.

Fifth: Such a survey is bound to be inaccurate and inadequate because:

(a) Otological (ear) examinations are absolutely necessary to the project. The prospectus states, however, that this is not a medical project. (b) The census-takers will have difficulty in getting the parents to admit that a child three years old is deaf. They insist that he has not yet begun to talk, and in some cases they are right. (c) So far as we know, there is no authority that compels parents to give the census-taker such information anyway.

Sixth This project is an unwarranted intrusion into a medical and educational problem by sponsors who are not certified either medically or educationally

Seventh If this project had any justification, which the Medical Society of the County of Monroe feels that it has not it should be definitely a community medical and educational problem and should be handled only by medical and educational authorities. Both these groups have been ignored

Further, the feeling among many physicians and educators is that since the family doctor is both physician and confessor, he will be the first person to detect these deaf children and through his personal contacts and the cooperation of the County Medical Society their best interests will be served, and no elaborate set up or useless expenditures of money would be involved

We are submitting this protest with no thought other than to clarify the subject and prevent unnecessary waste of funds and effort. It is the attitude we would assume in opposing

any other public project upon which our special training qualified us to speak

Yours very truly,
(Signed) C. Stewart Nash, M.D.
Chairman Sub Committee on
Deafness and Hard of Hearing

Willard H. Veeder, M.D.
President Medical Society
of the County of Monroe

E. G. Whipple, M.D.
Chairman Public Health Committee

On formal motion the Executive Committee resolved

That the action of the Medical Society of the County of Monroe, protesting against the proposed WPA project calling for a survey of deaf children of pre school age be heartily endorsed and that due publicity be given to the action in the State Journal

D. S. DOUGHERTY, M.D.,
Secretary

County Societies

Erie County

Dr. E. J. MEYER, prominent Buffalo physician and president of the Buffalo City Hospital Board of Managers died suddenly on September 13 of a heart attack. He was 66.

Dr. Meyer was stricken as he sat with a group of friends aboard his yacht, in the Buffalo Yacht Club basin. He died within a half hour despite the efforts of Dr. P. J. Walsh, his personal physician, who was aboard the yacht, to revive him.

He was called the father of the City Hospital, leading the drive in 1927 for a bond issue of \$2,169,216 for additions to the institutions, a project defeated, however by a referendum after a bitter controversy among physicians and citizens.

In 1931 the medical and surgical buildings of the hospital were completed and dedicated to Dr. Meyer in recognition of his services.

At a special meeting of the Board of Managers, Buffalo City Hospital, held September 16, 1935 for the purpose of taking suitable action regarding the death of Edward J. Meyer, M.D., President the following was enacted:

Whereas Edward J. Meyer, M.D., on May 27, 1912, was appointed a member of the Board of Managers Buffalo City Hospital by the Honorable Louis P. Fuhrmann Mayor and immediately thereafter was elected President,

which office he held continuously until his passing, and

Whereas, Under his guidance the Board of Managers acquired a site for and accomplished the construction and equipment of a public general hospital at a cost of approximately four million dollars for the reception and treatment of all diseases and

Whereas, Due to his leadership the Buffalo City Hospital from the start assumed an outstanding position as one of the few general hospitals, public or private, in the United States, and

Whereas Acting upon the recommendation of our distinguished President, the Buffalo City Hospital has furnished a complete medical service to all residents in the community, and

Whereas, Edward J. Meyer, M.D., fostered a close union between the University of Buffalo and the Buffalo City Hospital for the purpose of promoting the education of physicians, dentists, nurses and dietitians, thereby assuring the highest type of service to patients and

Whereas, During his lifetime he attained an outstanding position as a surgeon and throughout his entire career worked for the advancement of the profession which he adorned and loved, therefore be it

Resolved That the passing of Edward J. Meyer, M.D., is a grievous loss to his family and friends and the community in which he was born and reared, that his record as a voluntary public servant stands, in local annals unequalled for length of service and unexcelled for probity and wisdom and be it further

Resolved That the inscription on the brass

tablet placed in the Buffalo City Hospital during his lifetime, June 1932, as a permanent memorial be reaffirmed as follows:

The medical and surgical buildings comprising this unit are dedicated to

EDWARD J. MEYER, M.D.

Born August 15, 1869

President, Board of Managers, Buffalo City Hospital, since May 27, 1912, Appointed by Honorable Louis P. Fuhmann, Mayor.

"Record in the Medical School, University of Buffalo

Graduated in Medicine.....	1891
Surgeon on Dispensary Staff.....	1893
Instructor in Surgery.....	1895
Adjunct Professor of Clinical Surgery.....	1898
Assistant Professor of Surgery.....	1916
Emeritus Clinical Professor of Surgery.....	1919

"Dr. Meyer has labored long and faithfully in the interests of the Buffalo City Hospital. Throughout the years, he has held, steadfastly, that the functions of a hospital are, first:—care of the patients—second:—training physicians, dentists, nurses and dietitians—third: research. His motto has been: "Salus populi suprema lex esto."—Cicero, (Let the health of the people be the supreme law.)"

ERECTED JUNE 1932

And be it further

Resolved, That these resolutions be inscribed on the minutes of the Board of Managers, Buffalo City Hospital, and a formal copy of the same presented to his family.

Oneida County

FOR THE SIXTH CONSECUTIVE YEAR the golfing team of the Syracuse Academy of Medicine gained possession of a loving cup from the Utica Academy of Medicine players.

The visitors won their annual match at the Yahnundasis Golf Club in Utica, on September 19th, by 930 to 963, those figures representing the aggregate medal scores of players.

At a brief business meeting prior to the annual dinner, Drs. W. Roy Van Allen, Utica, and John H. Powers, Mary Imogene Bassett Hospital, Cooperstown, were accepted as members of the Utica Academy. Six new members were proposed and will be voted on at the next meeting.

Dr. F. M. Miller, Sr., president of the Utica Academy, presided at the dinner and business session and introduced Dr. Adelbert Abbott, who gave a brief address. Dr. H. Walden Retan of Syracuse, a member of the entertainment committee, was master of ceremonies for the program, which included songs and two skits by Dr. Orren D. Chapman.

Results of the golf tournament:

Syracuse—Pelow, 81; Gilmore, 84; Cain, 93; Andrews, 92; Werfelman, 92; Dye, 95; Rulison, 97; Laurie, 97; Walsh, 98; Allen, 101—930.

Utica—Moffatt, 88; Grant, 93; Gage, 92; Sloan, 91; B. Golley, 92; Remmer, 92; McMillen, 103; L. Golley, 104; Pender, 104; Groff, 104—963.

Queens County

MEMBERS OF THE WOMEN'S AUXILIARY of the Queens County Medical Society attended a dinner on September 24, at the Forest Hills Inn, under the auspices of the Queensboro Tuberculosis and Health Association and the Queens County Medical Society.

After the dinner the auxiliary opened its season with a short meeting in the Medical Society Building, Forest Hills. After its own meeting members attended a joint meeting of the Tuberculosis and Medical Societies in the same building.

The annual dinner-dance of the auxiliary will be held November 9 at a Manhattan hotel.

First District Branch

The feature of the meeting of the First District Branch of the State Society on October 8th was a strong attack on compulsory sickness insurance made by President Frederic E. Sondern. "The figures in the United States and Canada, where there is no State medicine, show morbidity and mortality are the lowest in the world," he said, "England and Germany, where they long have had government supervision, are ten years behind us."

Other speakers were Drs. John J. Moorehead, Hugh Auchincloss, George Miller MacKee, Byron Stookey, Daniel Dougherty and Terry M. Townsend, president of the District branch which includes the counties of the Bronx, New York, Westchester, Rockland, Dutchess, Putnam, Orange, and Richmond. About 100 physicians were present. The sessions were held at the Hotel Pennsylvania in New York City.

Third District Branch

The Third District Branch of the State Society met at the Hendrick Hudson hotel in Troy on September 24, with a large attendance. Addresses were made by President Sondern and Drs. L. C. Kress of Buffalo, C. J. Handron of Troy, E. H. Campbell, Jr. of Albany and Warren Wooden, of Rochester. The paper prepared on "The Legal Aspects of Malpractice," by Atty. Thomas H. Guy of Troy was read by his law partner, Atty. John Broderick, Mr. Guy being out of town. Many of the physicians gathered at the meeting spent the forenoon visiting the Troy, Samaritan and Leonard Hospitals; others visited the Maternity Hospital, Pawling Sanatorium and Marshall Sanatorium. The Third District Branch includes the counties of Albany, Rensselaer, Schoharie, Greene, Columbia, Ulster, and Sullivan.

Fourth District Branch

The modern treatment of pneumonia was the main topic of discussion at the annual meeting of the Fourth District Branch of the State Society at Saratoga Springs on September 27 and 28. This district includes the eleven counties of St. Lawrence, Franklin, Clinton, Essex, Hamilton, Fulton, Montgomery, Schenectady, Saratoga, Warren, and Washington. Dr. Russell L. Cecil of New York City explained in an interesting address the details of the attack on pneumonia which medical societies are preparing to make throughout the state during the coming months. Other speakers were Drs. A. L. Lockwood of Toronto, L. W. Gorham of Albany, W. S. McClellan of Saratoga Springs, Howard Lihenthal of New York City, and T. F. Farmer of Syracuse. President Sondern was the chief speaker at the dinner meeting on Friday evening.

Fifth District Branch

Silicosis and its relation to industry and tuberculosis was the subject of an informing discussion at the annual meeting of the Fifth District Branch of the State Society at the Black River Valley Club at Watertown on October 1st. The district includes Herkimer, Jefferson, Lewis, Madison, Oneida, Onondaga, and Oswego counties. Papers on silicosis were presented by Drs. C. C. Trembley of Saranac Lake, and D. M. Brumfiel and Mr. O. G. Browne, of the claims department of the New York Central Lines. President Sondern described the plans for a statewide drive on pneumonia. Other papers were presented by Drs. Murray M. Gardner of Watertown and Dan Mellen of Rome. Dr. Gardner was elected district president to succeed Dr. L. F. Hollis of Lacona.

Sixth District Branch

Dr. George W. Crile of Cleveland, Ohio, was one of the outstanding speakers to address the physicians gathered at Elmira, September 18, at the annual meeting of the Sixth District Branch of the State Society. He came by special invitation to describe the use of surgery in certain types of heart disease. Another invited speaker was Dr. Austin A. Hayden of Chicago, who gave an illustrated lecture on the activities of the American Medical Association, of which he is a trustee. The district embraces the nine counties of Broome, Chenango, Chemung, Cortland, Delaware, Otsego, Schuyler, Tompkins, and Tioga. Other speakers were President Frederic E.

Sondern, Dr. Ethan F. Butler, Elmira, Dr. Herbert M. Bergamini, New York City, Dr. Leon F. Sutton, Syracuse, and Dr. John F. McCarthy, New York City.

Dr. Leo P. Larkin of Ithaca was elected district president, Dr. Reeve B. Howland of Elmira, was elected first vice president, Dr. Hubert B. Marvin, Binghamton, secretary, and Dr. William A. Moulton, Candor, treasurer.

Seventh District Branch

An important paper on infantile paralysis was presented by Dr. J. A. Kolmer, of Philadelphia at the annual meeting of the Seventh District Branch of the State Society at Canandaigua on September 26, discussing susceptibility, immunity, and vaccination. Other speakers included Dr. Frederic E. Sondern of New York City, state society president, Drs. Floyd S. Winslow, James M. Flynn, E. T. Wentworth, and Warren Wooden of Rochester, Joseph S. Lawrence of Albany, Raymond F. Johnson of Auburn, Nelson G. Russell of Buffalo, Wardner D. Ayer of Syracuse, Thomas W. Maloney of Geneva, Howard M. Clute of Boston. The district includes the eight counties of Monroe, Wayne, Cayuga, Seneca, Yates, Ontario, Livingston, and Steuben. The meeting was held at the Veterans' Hospital where Dr. Hans Hansen, manager, offered visiting physicians an opportunity to examine the facilities established there for the treatment of neuropsychiatric conditions.

Eighth District Branch

A discussion of medical relief under the TERA featured the morning session of the Eighth District Branch of the State Society at Warsaw on October 3 following an address on the subject by Dr. H. J. Davis, Director of Medical Care, TERA, and Consultant in Medical Care, PWA, New York City. The statewide drive on pneumonia was described by President Sondern at the afternoon session, Dr. H. K. Thompson of the Tufts Medical School spoke on "The Management of Arthritis," and Dr. G. de Takats of Northwestern University spoke on "Peripheral Vascular Disease." This district embraces the eight counties of Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, and Wyoming. Dr. H. W. Ingham of Jamestown, was elected district president, Dr. Herbert A. Smith, Buffalo, first vice president, Dr. L. L. Klostermeyer, Warsaw, second vice president; Dr. Henry M. Spofford, Batavia, re-elected secretary, Dr. Fitch H. Van Orsdale, Belmont, re-elected treasurer.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Ownership of X-Rays

Previously in these columns we have commented upon the legal aspects of the question of the ownership of x-rays. Very recently a case* came before the highest court of one of the Mid-Western states which squarely presented the question as to whether x-rays belong to the physician. It is necessary to detail the facts of the case to some extent to properly appreciate the ruling.

An employee of a highway construction company was injured in the course of his employment and the company engaged Dr. M. to give the workman the necessary medical or surgical care. The doctor attended the patient over a period from September to the following January. It appeared that the workman had been using a crowbar which in some manner slipped, and caused him to wrench his body so as to cause lower back injuries involving the sacroiliac joint. Incidental to the treatment various x-rays were taken by the doctor. Afterwards the employer of the patient had demanded the x-ray negatives from the doctor for use by other physicians, and he had refused to hand them over, although he expressed willingness to permit their inspection if not removed from his offices.

When the doctor's bill was presented to the company, it declined to pay and he brought an action to enforce payment. The defendant company admitted the employment but set up as defenses the claim that the employee's condition was not frequently enough reported to the defendant by the doctor, and the fact that the plaintiff had refused to deliver the x-ray negatives to the company when demanded.

Upon the trial a verdict was rendered in favor of the doctor by the Court sitting without a jury. An appeal was taken by the defendant company to further test out the validity of its defenses.

The first defense relative to failure to report was disposed of by the Appellate Court, with the finding that the plaintiff had not failed to report the workman's condition when requested, and that there had been no understanding specifically made to make any particular number of such reports.

The Court, in rejecting the second defense, specifically held that the plaintiff had been entitled to retain the x-ray negatives, and in its opinion, said in part:

Further, plaintiff was fully justified in refusing to surrender possession of the x-ray negatives. In the absence of agreement to the contrary, such negatives are the property of the physician or surgeon who has made them incident to treating a patient. It is a matter of common knowledge that x-ray negatives are practically meaningless to the ordinary layman. But their retention by the physician or surgeon constitutes an important part of his clinical record in the particular case, and in the aggregate these negatives may embody and preserve much of value incident to a physician's or surgeon's experience. They are as much a part of the history of the case as any other case record made by a physician or surgeon. In a sense they differ little if at all from microscopic slides of tissue made in the course of diagnosis or treating a patient, but it would hardly be claimed that such slides were the property of the patient. Also, in the event of a malpractice suit against a physician or surgeon, the x-ray negatives which he has caused to be taken and preserved incident to treating the patient might often constitute the unimpeachable evidence which would fully justify the treatment of which the patient was complaining. In the absence of an agreement to the contrary, there is every good reason for holding that x-rays are the property of the physician or surgeon rather than of the patient or party who employed such physician or surgeon, notwithstanding the cost of taking the x-rays was charged to the patient or to the one who engaged the physician or surgeon as a part of the professional services rendered. Careful research indicates that the question here presented is one of first impression. While not fully to the point, it has been indicated by court decisions that the negative of an ordinary photograph, in the absence of an agreement otherwise, belongs to the operating photographer, though his use thereof may be restricted.

The court's ruling in the case is in accord with the opinion expressed in your Counsel's article which appeared in these columns several years ago, and is also in accord with a resolution which has been adopted by the Radiological Society of North America, as follows:

That all roentgenograms, plates, films, negatives, photographs, tracings or other records of examinations are the property of the roentgenologist who made them or the laboratory in which they were made.

* McGarry v. J. A. Mercier Co., 262 N. W. 296.

Treatment of Tuberculosis

A young man about 23 years of age entered one of the private hospitals in the City of New York for the purpose of receiving treatment with respect to a condition that he then complained of. He came under the care of a general practitioner who was requested by a relative of the patient to take charge of the case. The physician obtained the patient's personal history and family history, which included information that certain relatives suffered from tuberculosis.

Examination led the doctor to make a tentative diagnosis of pleurisy with effusion. The doctor in an attempt to make a definite diagnosis of the case had sputum analysis and urinalysis made as well as x-rays taken of the patient's chest, all of which were negative for tuberculosis although the doctor felt the case was actually one of tuberculosis. He called another physician into consultation concerning the case and it was determined that the patient should be treated as a case of tuberculosis and the patient was kept at the hospital for some weeks where he received complete rest in bed. He was placed on the roof sun porch daily. The patient was not informed of the precise nature of his condition but his relatives were so informed.

The patient left the hospital contrary to the doctor's orders, returning to his home much sooner than was requested and at his home the doctor continued to see him frequently over a period of about a month. During that time the patient was kept in bed and remained there until his temperature became normal. The doctor then told the patient that he must be very careful of his condition and was sent to the mountains for absolute rest. The patient thereupon went to the mountains and the next thing the doctor heard from him was a few weeks later when the patient came into his office for examination. The patient was found to be in a satisfactory condition and was advised to again return to the country for rest, and to take things easy and to keep under continuous observation.

The occasions that the doctor saw the patient became less frequent, but the patient's condition when observed by the doctor seemed to be satisfactory. During that period of time various sputum tests were made and various fluoroscopic examinations were made, all of which were negative for a definite diagnosis of tuberculosis. The patient was repeatedly advised to be careful not to over work and to get as much rest as possible. Sometime later, after a period of approximately a year had elapsed since the doctor had last seen the

patient, he again called at his office and the doctor then found the patient to be suffering from hoarseness, running a temperature and showing what seemed to be definite signs of tuberculosis. The doctor did not continue to treat him however, and he went under the care of another doctor who treated him for a period of about a year and a half for an active condition of tuberculosis; the patient at the end of that time was apparently cured.

A malpractice action was brought against the doctor who had treated the patient since the original confinement in the hospital. The claim was made that the doctor failed to make a timely diagnosis of tuberculosis and that the doctor had improperly advised the patient to engage in strenuous work and strenuous exercise as a result of which it was claimed the patient was obliged to undergo an extended period of treatment in an endeavor to be cured.

The case came on for trial before a judge and jury and at the conclusion of all the testimony the issues were submitted to the jury and a verdict of no cause of action was returned in favor of the doctor.

Facial Paresis Following Mastoidotomy

A physician who specialized in ear, nose and throat work, in the course of his service on the staff of a hospital clinic, had his attention called to a young woman whose condition had been diagnosed as acute bilateral suppurative mastoiditis. She was referred to him for consultation only. He examined her and concurred in the diagnosis, and the same day another physician associated with the staff of the same hospital performed the operation, which was successfully performed, and which established the accuracy of the diagnosis. The patient remained in the hospital for about ten days and after her discharge received treatment at the clinic. About five weeks after the operation a slight facial paresis was observed.

Nearly three years after the operation was performed the patient brought an action against the physician who was called into consultation, charging him with having personally performed the operation and charging him with having negligently cut the plaintiff's facial nerve during the operation, and also charging him with having given her false and improper advice subsequent to the operation.

An application was made to the Court for a judgment dismissing the action on the ground that the acts complained of took place more than two years prior to the com-

mencement of the action. The motion was opposed on behalf of the plaintiff on the theory that the defendant had given false and fraudulent advice to the plaintiff after the operation and that, therefore, the Statute of Limitations did not begin to become effective until two years after that advice was given the patient. The Court, however, determined that the date of the operation complained of was the controlling date and directed judgment in favor of the defendant dismissing the complaint.

Fracture of Elbow

A physician who specialized in surgery was called by another doctor to attend a nine year old girl at a hospital. He found her suffering from an injury to her left elbow which she had received while skating. Upon examination he made a diagnosis of supracondylar fracture of the left humerus near the joint with dislocation of both the radius and ulna, with considerable swelling. X-rays confirmed the diagnosis. The doctor explained to the child's father the difficult nature of the fracture and obtained his consent to reduction under general anesthesia. The doctor obtained satisfactory alignment by such manual reduction and applied a plastic cast with the arm in semiflexion. An x-ray after the reduction showed almost complete reduction of the lateral displacement and partial reduction of the backward displacement. The patient remained in the hospital for about ten days with instructions to return to the doctor later. He saw her about two weeks later, removed the cast, and found the arm had present callus formation with slight

limitation of flexion and extension. X-rays were taken at about that time which showed the coronoid process was coming into contact with the lower end of the humerus after a 90° flexion. According to the doctor the child's parents were advised that an open operation might be necessary but advised them to wait at that time and to continue with baking and physiotherapy. The patient, however, was never brought back to the doctor for any further care.

A malpractice action was brought on behalf of the child in which it was charged that the defendant had been negligent in his care and had permitted a deformity to result. The case came on for trial before a Judge and jury and the plaintiff's parents testified that instead of discussing the proposition of an open operation with them the defendant had summarily dismissed them, assuring them there was nothing further he could do for the arm and refusing to name another physician to whom they might consult. After the case had been on trial for sometime and certain witnesses in addition to child's parents had testified, but no doctor had appeared as an expert witness on behalf of the plaintiff, plaintiff's counsel requested the Court to grant a delay until additional witnesses could be called. The Judge directed that he would allow plaintiff's counsel a reasonable time to produce such witnesses and when no such witnesses were put on the stand the Court granted the defendant's motion to dismiss the complaint. Plaintiff took an appeal from the judgment entered in favor of the doctor but did not take the necessary steps to bring on the said appeal for hearing. A motion to dismiss the appeal was thereupon granted, finally terminating the matter in favor of the doctor.

A "FORTUNE" IN MAKING BAD BREATHS GOOD

It seems to the *New York Times* that "opportunity beckons" in *The Journal of the American Medical Association*. The "specifications for the making of a fortune," it adds, are given there in an article written by Drs. Howard W. Haggard and Leon H. Greenberg of Yale's laboratory of applied physiology.

The doctors have been studying bad breath. They convinced themselves after much experimenting that it is usually purely local in origin. At any rate, there can be no doubt that the strong odor of garlic and onions comes from the mouth. Minute bits of the vegetables lodge between the teeth, in pockets and on the

papillae at the base of the tongue, decompose and thus give off odors.

Having satisfied themselves on this point, the doctors experimented with the better known washes. Good for no more than fifteen or twenty minutes, they found. Soap and water proved to be no better.

At last they hit on chloramine, which can be brought in any drug store. They brush the teeth and washed the mouth with Dakin's solution, made by dissolving a 4.6-grain tablet of chloramine in a little water. Even powerful garlic yielded, not for fifteen minutes but for good and all.

"The chlorine liberated in the mouth reacts chemically with the essential oils and deodorizes them," is the explanation given.

Across the Desk

PSYCHIATRIC RESCUE WORK IN THE PRISONS—If there is any place where the psyche needs a physician it is the prison. True, many would put the mental hospital first, but there the mental disorder of the patient is already recognized, while in the prison the quirks of the convict's character and disposition are sometimes so cleverly disguised as to baffle the keenest scrutiny.

It is only within the past few years, it is surprising to note, that serious effort at psychiatric work has been made in the Federal penitentiaries. The psychiatric service, a part of the medical service, was organized in 1931, when the medical work was taken over by the U S Public Health Service. Each prison now has a psychiatrist and a psychologist, assisted by inmate clerical help. Their aim is to straighten out the twists and gnarls in the convicts' psychology and adjust him mentally to live and work in peace and harmony with society when he comes out from behind the bars. Many long and high-sounding names are given to these unfortunates, but Dr. Meninger in *"The Human Mind,"* dismisses such terms as "psychopathic personality" and describes them simply as "perverse." And that is what they are, declares Warden H. C. Hill, of the U S Northeastern Penitentiary at Lewisburg, Pa. "They are headed cross stream, playing at the game, but breaking all the rules," he says, with a slight mixture of metaphor. "Their defectiveness is in their emotional functioning, and they simply cannot keep out of trouble. They may achieve some good in the world, but the world pays dearly for it and the net total of their lives is 'in the red'."

The interesting account of what is being done to set these straying and stumbling feet upon the straight path comes as a result of a radio talk on psychiatry given a few weeks ago under the auspices of the Medical Information Bureau of the New York Academy of Medicine. Radio listeners wrote in for more information about the psychiatric work for Federal prisoners, and a query sent to Washington brings a sheaf of printed reports telling all about it.

Gone are the days when a prison was just a place to lock up criminals and keep them from preying on society for a certain number of years. Now the expert psychiatric work of "ministering to a soul diseased" begins as soon as the man is inside the walls. New prisoners are kept in a kind of quarantine for thirty days before being assigned to their regular quarters and work, and

during that time they are subjected not only to a searching health examination, but also to thorough psychological and psychiatric investigations.

Of course the work is new and we must not expect too much from it as yet, but a beginning is something. These tests of body, mind, and character determine where the convict shall be located, his companions, his work, and, in short, the whole complexion of his prison life. And the examination never ends while he is there. The psychiatrist has him under constant observation and if his regimen is not working out favorably, the prescription is changed, exactly as Dr. Brown does, in the case of Jim Robinson or Susie Doolittle. When a convict breaks the prison rules and comes under discipline, the psychiatrist is there on the run, trying to readjust the motivation that has gone awry, just as the surgeon sets the broken bone. The hardened old criminal is pretty far past any psychiatric help but the new offender, eager to regain his lost place in the world, offers a promising opportunity.

We think at once of the doctor's sensitive finger tips going over the patient, pressing here, tapping there, as we read of the psychiatrists' insistent questions about the convict's past life, all his diseases, his mental disturbances, convulsions, dreams, work habits, social adjustments and maladjustment, memories, delusions, drug and alcoholic addiction, and a hundred other things. Every item goes into a record, which grows steadily year by year, and when the convict leaves, it passes into the hands of the parole officer, whose duty it is to help the man go straight in his new freedom among his fellows.

Like a huge sifter, the psychiatric tests that are going on all the time, year in and year out, in our Federal penitentiaries, sort out the psychotic cases, the drug addicts and the feeble-minded and send them to special institutions. Then the borderline psychopathic individuals, the psychoneurotic, and the emotionally unstable are separated for special treatment, the hardened habitual criminals are segregated from the general prison population and the rest are analyzed and classified for vocational guidance and occupational placement. No one claims that the work is perfect. Borderland mental deviates should have a special institution fitted for their treatment and a larger force of psychiatrists and psychologists is needed if justice is to be done.

to individual cases. Now it is necessary to ask all the prison officials to assist in the work, of which they have no adequate knowledge or training.

Experts say that the abnormal psychopathic element of the prison population amounts to roughly 15 per cent of the total. Of these, the vicious mental defectives are a frequent source of trouble, often having psychotic periods requiring hospitalization. The docile mental defective is a less serious problem, but is easily led astray. The constitutional psychopathic inferior group provides the greatest disciplinary problem of all. Their boastful attitudes and egotism are well known. Prison life brings them into mental conflicts, intolerable situations, and mental disturbances. Hospitalization, with rest and quiet, usually restores the equilibrium. The sneaking introvert types are tricky, and get what they want by putting others up to mischief while they keep in the background. Then there are the paranoid cases, the panicky victims of fears, the borderline defectives, and the assorted antisocial characters of all types.

Here is certainly a fascinating work for the physician interested in psychiatric problems. How important is it at present? It must be admitted that it is in its infancy, but it is bound to have important developments. "Now," says an Assistant Director of the U. S. Bureau of Prisons, "it is not uncommon to find the professional staff sitting lightly upon the institution organization like the foam upon a glass of beer, adding considerably to its appearance, but quickly blown aside whenever there is serious work to be done." Any such situation, however, is contrary to the ideas of the Bureau. The policy of the Bureau, we are told, "is to imbue every warden, every civilian with the idea that the primary function of the institution is to reeducate and rehabilitate the inmate." In this work the psychiatrist must be the key man.

No one can even glance over the programs of the current medical meetings without reading there as clear as daylight the growing interest in psychiatry, and not the least intriguing part of the picture is the splendid effort of the psychiatrist to take the twisted and trampled soul of the criminal in his skillful fingers and reshape it into the semblance of manhood.

Preventive psychiatric work needed. How much better, however, if the psychic snarls could be untangled before the unfortunate man or woman becomes a candidate for the jail or the mental hospital! That is what is urged by the New York State Department of Mental Hygiene. It would have mental hygiene taught in the schools and

colleges, along with physical hygiene. Physical hygiene has been part of the public school course for a half a century and has been a marvelous aid to health. Now mental hygiene is knocking at the door, and some of our best schools have admitted it to their classrooms. Instructors trained to teach it are few as yet, but they would no doubt multiply to meet a demand. Many physicians, now taking up the study of psychiatry, could well assist in this work.

The associate editor of the *Mental Hygiene News* suggests an outline of instruction. "The general anatomy and physiology of the nervous system and its relation to other parts of the body and to the mind and the special senses could be taught," says Horatio M. Pollock, Ph.D. Then might follow a study of mental habits that make for efficiency or inefficiency, as attention or day-dreaming, mental vigor or listlessness. It is easy to distinguish the habits that make for mental health or ill-health. It is but a step from this to an analysis of the mind of the individual child. Does he take a keen interest in his school studies, athletics, societies? Is his thought clear or foggy? Does he welcome or avoid work?

If the answers are unsatisfactory, it is evident that the probe must go deeper. The child may be mentally or morally weak, or be suffering from defective special senses, from physical defect, vicious environment, or mental conflicts. Anything of this sort should be discovered and, if possible, corrected.

It is not impossible, either, that the school itself may be partly to blame for the bad mental habits of the pupils. Dawdling along may be the style in certain classrooms, and when that is the case, the teacher and the school should be investigated. Some teachers are declared to be virtually carriers of mental disease, and some schools literally centers of contagion. If the teacher is aroused to active interest in the mental health and vigor of the pupils, such an unfortunate situation should soon right itself.

As the twig is bent, the tree's inclined, and local medical societies, with the growing interest in psychiatry, may well encourage this movement to take the kinks out of the twigs. The child-mind, we are also told, is "wax to receive and marble to retain," and it will be far easier to shape the mind in this tender period than to attempt it later in the penitentiary stage.

Among the many current papers on psychiatry is one read before the Louisiana State Medical Society by Dr. T. J. Perkins of Simmesport, La., on "The Importance of Mental Hygiene to the Medical Practi-

tioner" Dr Perkins notes that there were 70,000 new admissions to the mental hospitals in this country in 1933, and he asks, "Where are the 70,000 who will be admitted this year, or the 140,000 to be admitted in two years, or the 350,000 to be admitted in five years, or the 700,000 to be admitted in ten years?" It is the duty of the doctor,

he believes, to detect these cases and correct them before they reach the point where hospitalization is necessary. It is here that the physician needs such a knowledge of psychology and psycho-pathology as will enable him to recognize the early symptoms of morbid mental states and apply the proper methods for relief.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits or in the interests of our readers.]

The American Illustrated Medical Dictionary. By W A Newman Dorland, M D. Seventeenth edition. Octavo of 1573 pages, illustrated. Philadelphia, W B Saunders Company 1935. Cloth, \$7.50.

Puerperal Gynecology. By J L Bubis M D. Octavo of 199 pages, illustrated. Baltimore, William Wood & Company 1935. Cloth \$3.50.

Diseases of the Liver, Gall Bladder, Ducts and Pancreas. Their Diagnosis and Treatment. By Samuel Weiss, M D. Quarto of 1099 pages, illustrated. New York, Paul B Hoeber, Inc 1935. Cloth, \$10.00.

Living Along With Heart Disease. By Louis Levin, M D. Duodecimo of 126 pages. New York. The Macmillan Company 1935. Cloth \$1.50.

A Marriage Manual. A practical guide-book to sex and marriage. By Hannah M Stone, M D and Abraham Stone, M D. Octavo of 334 pages illustrated. New York, Simon & Schuster 1935. Cloth \$2.50.

Clinical Diagnosis by Laboratory Methods. A Working Manual of Clinical Pathology. By James C Todd M D and Arthur H Sanford, M D. Eighth edition. Octavo of 792 pages, illustrated. Philadelphia, W B Saunders Company 1935. Cloth, \$6.00.

Clinical Atlas of Blood Diseases. By A Piney M D and Stanley Wjard M D. Third edition. Duodecimo of 110 pages illustrated. Philadelphia P Blakiston's Son & Co 1935. Cloth, \$4.00.

Apraxia a Clinical and Psychological Study. By Theodore Weisenburg, M D and Katharine E McBride, Ph D. Octavo of 634 pages, illustrated. New York, The Commonwealth Fund 1935. Cloth, \$5.00.

New and Nonofficial Remedies, 1935. Containing Descriptions of the articles which stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1935. Duodecimo of 510 pages. Chicago, American Medical Association 1935. Cloth, \$1.50.

REVIEWED

System of Diet Writing Including Diet Calculator, Obesity Chart, Diet Formulary, 100 Menu Prescription Forms. By William S Collens M D. New York, Form Publishing Co, [c 1933]. Cloth, \$5.00. Oblong 16mo of 142 pages.

Medical literature abounds in theoretical considerations as to whether the diabetic should have a low, medium, or high carbohydrate, protein, or fat diet. The editorial columns of the leading medical organs bemoan the rising death rate in diabetes. In the face of this not a hand is turned to save the general practitioner from having to wade through volumes of textbooks to find and copy an adequate diet for his patient.

Dr Collens in his small book has met the need of the medical man when the question arises "What shall I tell the patient?" Through a system of diets it is possible for the physician to arrive at practically any

desired combination of carbohydrate, protein, and fat. The dial reveals the skeleton of a menu, variations of which are readily accessible. It is unfortunate that some mathematical calculation is necessary and that the diet arrived at must be transcribed to another sheet. Optimum mineral, vitamin, unsaturated fatty acid, and protein contents still are left to the physician's discretion. Nevertheless, the system is a worthy step in the right direction and can be used in any case, diabetic or otherwise, requiring a measured or weighed diet.

Supplementary to the method of quantitative diet prescription is an excellent series of qualitative diets for various medical conditions as lead poisoning, peptic ulcer, nephritis, together with the essentials of the liquid, soft high residue, low-residue, alkaline, ash, acid ash diets, and low salt diets.

GEORGE E ANDERSON

Rats, Lice and History. Being a Study in Biography, which, after Twelve Preliminary Chapters Indispensable for the Preparation of the Lay Reader, Deals with the Life History of Typhus Fever by Hans Zinsser. Octavo of 301 pages. Boston, Little, Brown & Co., 1935. Cloth, \$2.75.

Dr. Zinsser has given to us, under the above title, one of the most illuminating books of recent years. With the touch of a savant in a highly specialized branch of medicine, he has linked his "fach" in striking manner with the humanistic side of the ravages of pestilence and epidemic through the centuries. With his wide knowledge of the technical facts of typhus fever and of the great plagues which have swept the earth from time immemorial, he presents a splendid brief against the folly and crime of war, contrasting the relatively few deaths from bullets and engines of war with the huge toll taken by the infectious diseases which decimate both armies and the general populace. His book is a scientific counterpart of the Rev. Norman Angell's *Great Illusion*. In his reveries the author combines science with history in a delightful style, which brings his thesis within the range of the lay mind, thus greatly augmenting the sphere of its usefulness. This is indeed a fascinating book from a scholarly mind, for which every serious reader will be grateful and from which much food for thought will be gathered.

J. M. VAN COTT

Infantile Paralysis. By George Draper, M.D. Octavo of 167 pages. New York, D. Appleton-Century Co., 1935. Cloth, \$2.00.

The author is a very pleasant writer and gives the lay reader a pretty clear idea of poliomyelitis and its prospects.

If the impression left is a bit more favorable than seems quite true, this is the right direction in which to err and may indeed be deliberate; it is an interpretation of stated facts and not misstatement.

The space given to "constitution" the reviewer would claim to be unduly large, but if one may not exploit his favorite child, why write? This reviewer cannot see its importance as great to this subject as its proportionate share of the book.

The non-professional reader will not be misled by what he reads here.

WALTER D. LUDLUM

The Autonomic Diseases or the Rheumatic Syndrome. By T. M. Rivers, M.D. Duodecimo of 299 pages. Philadelphia, Dorrance & Company [c. 1934]. Cloth, \$3.00.

The author has considered ground soil in relation to what might be termed a cross-section of the medical diseases. He has at-

tempted to correlate respectively with augmentary and inhibitory tendencies of the autonomic nervous system (as represented by the craniosacral and thoracolumbar systems) two large groups of pathological conditions: one, the so-called hypotonic type or rheumatic syndrome including rheumatoid arthritis, fibrositis, hypotension, carditis, allergy, migraine, asthma, spastic constipation, and so on; the other, the hypertonic type, including osteoarthritis, hypertension, angina, pectoris, arteriosclerosis, gastric ulcer, atonic constipation, and so on. The amines as allergens are accredited with producing many of the effects. Doctor Rivers has painted a very convincing picture of the rheumatoid syndrome.

While one may not agree with the premises and deductions, while scientific laboratory proof of the theories may not be available, the contents of this book represent a type of armchair philosophy which in the present day of nihilism is needed as well as refreshing. They portray how a thinking physician views the every-day garden variety of pathology as seen in his practice. The conclusions may be wrong; we cannot concur in many of the opinions; we are sure, however, that such thought as Doctor Rivers has given his individual patients is conducive to better practical medicine; the patient as well as the disease is considered.

GEORGE E. ANDERSON

Diabetes Mellitus and Obesity. By Garfield G. Duncan, M.D. Octavo of 215 pages. Philadelphia, Lea & Febiger, 1935. Cloth, \$2.75.

Excellent for the general practitioner and for the medical student, this small but complete volume deals with both subjects in a practical manner, omitting controversial viewpoints. It is up-to-the-minute in its information and clear in its simplicity.

Food metabolism is dealt with in detail to get a clear conception of the two major diseases discussed in the book as well as to give a rationale to their respective treatments.

The chapter on the Diagnosis of Diabetes Mellitus can be followed step by step to a proper conclusion by modern but simple methods.

The outline for ward and clinical treatment of the diabetic and his complications is an invaluable document. The practitioner will do well to study this chapter intently.

The classification of obesities and their treatment are clear and concise. Since obesity plays such an important part in relation to diabetes treatment of the obese in certain cases is excellent prophylaxis of diabetes.

S. GARSON SLO-BODKIN

**A CAMPAIGN TO REDUCE THE DEATH RATE OF
PNEUMONIA IN NEW YORK STATE**RUSSELL L. CECIL, M D, *New York City*

Pneumonia now ranks third as a cause of death in New York State. It is surpassed by heart disease and cancer, but these two conditions at least concentrate their attack chiefly on elderly people. Pneumonia picks its victims from all ages. In a climate such as our own it is probably the chief cause of death for people in the active period of life. There are approximately 12,000 deaths a year from pneumonia in New York State alone (Figs 1 and 2)*. This means that there is an annual incidence of pneumonia in the state of approximately 50,000 cases. The mortality rate is highest in infants and in the very old (Fig 3).

The great majority of pneumonias are caused by some type of pneumococcus. Lobar pneumonia might almost be called a specific infection caused by the pneumococcus, since over ninety-five per cent of cases are of pneumococcal origin (Fig 4). The streptococcus and Friedlander bacillus are responsible for a small percentage of cases, while the staphylococcus and influenza bacillus account for a still smaller proportion.

Pneumococci have been classified into thirty-two biological types. The most prevalent of these types in the etiology of pneumonia are the first three, namely, Types I, II and III. Of these, Type I is the most common, producing in most

clinics about one third of all lobar pneumonias (Fig 5). Type II ranks second, and is responsible for twenty to twenty-five per cent of all cases. Type III causes about twelve per cent of all lobar pneumonias. It is rare in the young, but very common in middle aged and elderly people.

It is evident that pneumonia is a public health problem of the first order and worthy of the most serious consideration. Up to the present time, the control of this disease has baffled the wisest of physicians and sanitarians, but there is reason to believe that we now have at our command certain agents that can be employed with conspicuous success in the treatment of this infection.

How can the modern physician actually help the pneumonia patient? There are a few things that are most essential. We can provide the patient with the best of nursing, we can supply oxygen when cyanosis develops and we can administer serum in those types of pneumonia which are amenable to serum treatment. The nursing situation is far from satisfactory. For example, the Metropolitan Life Insurance Company has found from a study of fatal cases of pneumonia among its policy holders that ten per cent of these patients were cared for by Metropolitan visiting nurses, forty per cent were treated in hospitals and the remaining fifty per cent received no skilled care of any kind (Fig 6). Good nursing is expensive, and many poor patients with

*The author is indebted to the Metropolitan Life Insurance Company for the privilege of presenting the accompanying charts.

Presented before the New York Public Health Association at Saratoga Springs, June 27, 1935.
Dr Cecil is Chairman of the subcommittee appointed by the Committee on Public Health and Medical Education of The Medical Society of the State of New York to study the pneumonia problem in New York State.

pneumonia remain at home during their illness and receive no skilled nursing care whatever.

Every patient with pneumonia who develops cyanosis should receive oxygen.

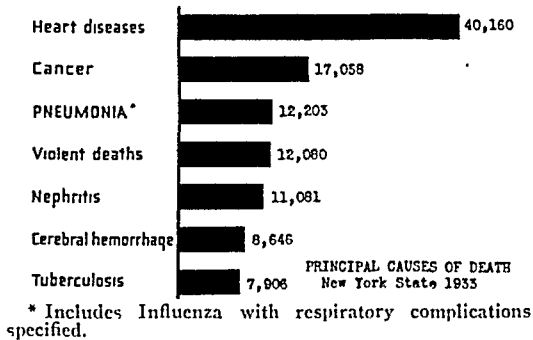


Fig. 1—12,000 Pneumonia Deaths a Year in New York State.

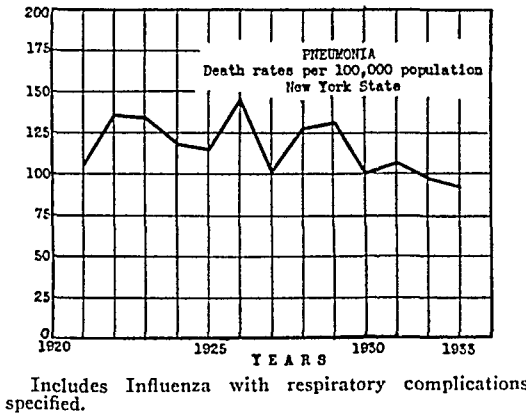


Fig. 2—Trend of Mortality from Pneumonia in New York State.

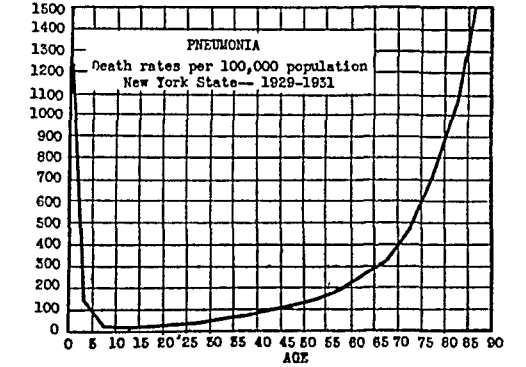


Fig. 3—Pneumonia Death Rates High Among Babies and Elderly Persons.

At present very few of them do receive it. Finally, and most important of all is the question of serum therapy, and it is on this phase of the question that the Pneumonia Committee proposes to concentrate its attention. The evidence now at hand as to the efficacy of Type I anti-pneumococcal serum is overwhelming. This evidence comes from experiments on animals, from clinical observations on patients, and from well-controlled statistics based on large groups of Type I patients. In Type II pneumonia, the effect of serum treatment, while not so striking as in Type I infections, is nevertheless quite definite. In Type VII, Type VIII, and Type XIV pneumonia, there is also evidence to show that serum has considerable value. The effect of serum therapy on the death rate in these various types is shown graphically in Fig. 7. These figures are based on statistics compiled from the reports of various authors in the United States. The results of serum therapy in Type I and Type II pneumonia as reported by British writers are just as favorable as those obtained in this country. The beneficial results of serum treatment are brought out even more clearly if one includes in the statistics only those patients who received serum during the first four days of their illness. In Fig. 8 it is shown that the death rate for Type I pneumonia treated during the first four days of the disease is only 9.6 per cent as compared with a death rate of 33.6 per cent for control cases. In Type II pneumonia the effects of early serum treatment are also indicated, the death rate being cut from 45.3 per cent for controls to 29.6 per cent for cases treated during the first four days of the disease.

Most of the patients who die of pneu-

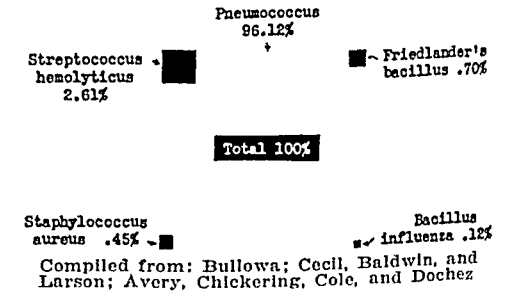


Fig. 4—Etiology of Lobar Pneumonia Among Adults.

monia die with a complicating pneumococcal bacteremia. In Fig. 9 the effect of antipneumococcal serum on patients with pneumococcal bacteremia is well brought out. In this chart it is clear that serum actually saves the lives of many patients with pneumococcal bacteremia. The death rate for Type I bacteremia cases is cut half in two. The same is true in Type VII and Type VIII infections. In Type II pneumonia the death rate is high even for serum treated bacteremic cases, but it is definitely lower than that for those who received no serum.

It should not be forgotten that antipneumococcal serum is valuable even for those patients who would recover anyway, as it usually shortens the acute stage of the disease by several days, and by so doing shortens also the duration of convalescence.

With many indications that the pneumonia problem is now amenable to attack, a campaign to reduce the death rate from this disease in New York State is being planned for the coming winter. This project is being jointly sponsored by the Medical Society of the State of New York, the New York State Department of Health, and the Metropolitan Life Insurance Company. The campaign will be conducted under the direction of an Advisory Committee consisting of representatives from these three organizations, and will be modelled roughly after the very successful pneumonia campaign which has been waged during the past five years in Massachusetts by the Commonwealth Foundation, and the Massachusetts State Department of Health.

The object of a campaign such as we

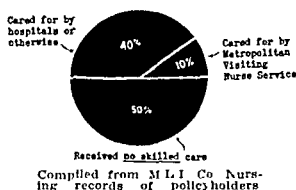


Fig 6—Nursing Care in Fatal Cases of Pneumonia.

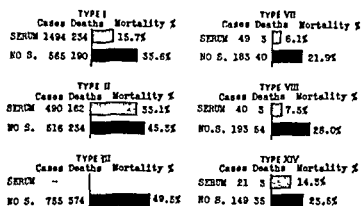


Fig 7—Effect of Serum Treatment on Pneumococcal Pneumonia.

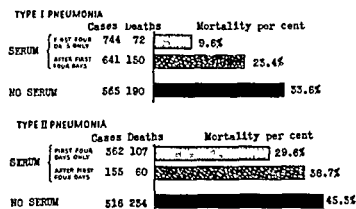
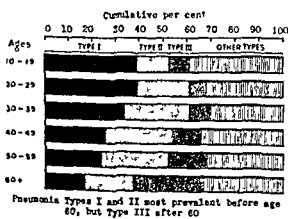
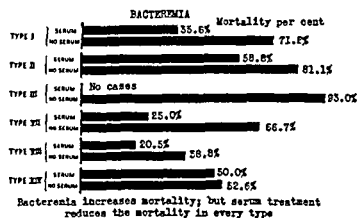


Fig 8—Effect of Serum Treatment During First 4 Days



Compiled by Cecil, Plummer, and McCall

Fig. 5—Age Incidence of Pneumonia—Types I, II, III.



Compiled from several authors.

Fig 9—Effect of Bacteremia on Mortality in Pneumococcal Pneumonia.

propose to carry out should be two-fold:

1. To reduce the incidence of pneumonia.
2. To provide better treatment for patients with the disease.

Unfortunately, reduction of the incidence of pneumonia is a tremendous problem in itself, and one which offers little hope of solution with the agents now at our command. While it is true that pneumococcus vaccine induces an efficient immunity in both animals and man, the protection afforded is of only a few months' duration. As a matter of fact, the incidence of pneumonia in American troops was definitely reduced during the World War by the use of pneumococcus vaccine, but here military discipline made possible the application of methods that would probably be impractical in civil life.

It is a common observation that both lobar and bronchial pneumonia are nearly always sequels of the milder forms of respiratory infection, chiefly influenza and the common cold. In the opinion of the writer, the ultimate control of pneumonia is closely tied up with the control of grip and coryza, and until we have a clearer understanding of these infections, the prevention of pneumonia by public health measures must remain an unsolved problem. The most that we can do is to stress to the layman the importance of taking proper care of a cold in the head, and of preventing its transmission to one's family and associates by isolation of the patient and by recourse to other well-recognized hygienic measures.

The second objective of the Committee is to provide better treatment for the patient with pneumonia, and it is toward this goal that most of its attention will be directed. There is every reason to believe that if the medical profession and the lay public of New York State can be sufficiently aroused to the importance of this problem, and if they will cooperate in the various measures proposed, a very definite reduction can be made in the death rate from certain types of pneumonia.

The Committee's immediate program is:

1. Dissemination of knowledge concerning the cause, nature and treatment of pneumonia.
2. A closer tie-up of physicians with the diagnostic laboratories of the New York State Department of

Health.

3. The facilitation of prompt nursing care and of efficient serum treatment in pneumonia.

A wide dissemination of knowledge concerning the pneumonia problem is, we believe, one of the most important functions of the Committee. This information will be spread in three directions: to *physicians*, *nurses*, and the *public*.

To *physicians* we will attempt to bring a gist of the large amount of knowledge that has been obtained by laboratory and clinical investigators during the past two decades concerning the etiology and treatment of pneumonia. In the opinion of the writer, there are several phases of the problem that should be particularly stressed to the practitioner. They are, early clinical diagnosis, early bacteriological diagnosis, and the prompt use of serum and oxygen therapy in suitable cases. Every physician of course is familiar with the classical signs of pneumonia, but if we are to make prompt use of oxygen and serum therapy, we must establish a diagnosis of pneumonia *before* the typical signs make their appearance; in other words, before complete consolidation of the affected lobe takes place. The modern diagnosis of pneumonia is made from the history and from the early symptoms and signs, such as chill, fever, pain in the side, cough, and the expectoration of pink or rusty sputum.

We also want every practicing physician to know that a bacteriological diagnosis, or "typing," on a case of pneumonia can now be made very quickly,—often in an hour or two—and that even in those exceptional cases in which sputum is lacking, the pneumococcal type can usually be determined promptly by using mucus from the throat, or in twelve to eighteen hours by means of cultures from throat swabs, or perhaps from blood cultures.

Finally, we wish to familiarize the family physician with the newer methods of serum and oxygen therapy, and to impress upon him the importance of using these agents early in the disease before the infection spreads and bacteremia develops. With the concentrated and refined products now in use, the serum therapy of pneumonia has become a fairly simple matter. We hope to hasten the day therefore when practically every

cise of pneumonia will be typed, and serum given to all patients who need it.

We propose to gain the interest and enthusiasm of physicians in this subject through various channels. THE NEW YORK STATE JOURNAL OF MEDICINE provides a medium in which our Committee can present various phases of the pneumonia problem from time to time during the winter months. In addition to medical articles and reprints, we are planning to have the subject of pneumonia presented by eminent speakers to every county society in the state.

Scientific exhibits have become a very popular method of presenting medical topics, and justly so, for by means of such exhibits a great deal of information can be absorbed in a short time. At the last meeting of the Medical Society of the State of New York in Albany, a pneumonia exhibit was presented under the auspices of the Committee on Public Health and Medical Education of the State Society, and the Metropolitan Life Insurance Company. This exhibit, consisting almost entirely of charts, created considerable interest, and was shown again this fall at the Annual Graduate Fortnight of the New York Academy of Medicine. The Pneumonia Commission of Massachusetts is also making use of an exhibit which has already been presented at several society meetings with great success.

Motion pictures, demonstrating the modern treatment of pneumonia, will no doubt prove of practical value, just as they have in various other phases of medical teaching. Dr. Jesse Bullowa of the Harlem Hospital, has recently prepared such a film which illustrates clearly the rapid methods of typing, allergy tests, serum therapy, etc.

The key note of this educational program for physicians should be *speed* in diagnosis, typing and treatment. Until doctors learn to treat the pneumonia patient as an *emergency* case, we will not make a very big dent in the pneumonia death rate.

Visiting nurses must be taught to recognize the early signs of pneumonia in order that the physician may be promptly summoned. Without the cooperation and advice of the visiting nurse, the patient and his family will often

mistake pneumonia for a severe cold, and medical care will be postponed until the time for efficacious treatment has passed. Nurses should also be instructed as to the proper method of collecting sputum, the early signs of allergic reactions, and the technic of running an oxygen tent.

We believe that the education of the *Public* in respect to pneumonia is just as important as the campaign for physicians and nurses. Our Committee has already put a great deal of thought on this phase of the program, and it is clear that a number of facts have to be taken into consideration. In the first place, the great majority of pneumonia cases occur in the cities. Therefore, the greater part of our effort should be directed toward educating the urban population. In the final analysis our problem must focus itself on the *individual*, that is, the individual layman. Rich or poor, he must be taught to call a physician, or go to a clinic or hospital as soon as he gets sick with a cold or cough. Unfortunately, we have no reliable figures that would tell us just what day of his disease the average patient with pneumonia is first seen by a physician, but we do have figures that indicate when these patients are first admitted to the hospital. In Fig. 10 there are some statistics based on the records of Bellevue and Harlem Hospitals. In a series of 2,670 cases of lobar pneumonia, 55.1 per cent were admitted to the hospital *after* the third day of the disease. If we allow one day for "working up" the case in the hospital, it is clear that more than one half of all pneumonia patients admitted to these two hospitals never receive any specific treatment until the fourth or fifth day of the disease, or even later.

Day	No. of Cases	Percent
ALL CASES	2670	100.0
FAST 5 DAYS	1200	44.9
AFTER 3rd DAY	1470	55.1
1st	295	11.0
2nd	455	16.2
3rd	474	17.7
4th	474	17.7
5th	370	13.9
6th	250	8.6
7th	175	6.6
8th	221	8.3

Compiled from Bellevue and Harlem Hospitals

Fig. 10—Lobar Pneumonia—Day of Morbidity When Admitted to Hospital

Treatment so late in the infection is usually too late to be effective.

Today the layman knows the significance of a chronic cough with fever. (Tuberculosis?) He must now be taught the dangers of an acute cough with fever. (Pneumonia?) The layman should also be instructed regarding what things *not* to do when he has a cold; such as, exposure to cold and wet, getting fatigued,

have been effectively employed by the Metropolitan Life Insurance Company, and are a valuable though expensive method of publicising information. Hand bills and posters attract wide attention, and have been used with great success in the campaign for vaccination against diphtheria. Such a hand bill for pneumonia has been used by the Metropolitan Life Insurance Company. (Figure 11.)

All of these mediums are available for our pneumonia propaganda, and we plan to make every possible use of them.

The second objective in the Committee's program is the development of a closer tie-up of practicing physicians with the laboratories of the New York State Department of Health, for the purpose of facilitating sputum typing, blood cultures, and any other laboratory work incidental to the diagnosis and treatment of pneumonia. As far back as 1916, the Division of Laboratories and Research of the New York State Department of Health initiated the manufacture and general distribution of Type I antipneumococcus serum, according to the methods devised by Cole and his coworkers at the Rockefeller Institute. At the same time the Division of Laboratories began to prepare and distribute diagnostic serum for Types I, II and III pneumococci. These products have been available for practitioners throughout New York State ever since that date.

In addition to the Central Laboratory in Albany, there are now one hundred twenty-eight laboratories in New York State (most of them in hospitals) which have been approved for general diagnostic service, and of these, seventy-seven have the approval of the State Commissioner for the examination of pneumonia sputum. During 1934 a total of 11,779 examinations for pneumonia were performed in State and approved laboratories.

The isolation of the new types of pneumococci (now thirty-two in all) and the discovery of rapid methods of identifying them have placed new demands on the Division of Laboratories, but these demands are being met by Dr. Wadsworth and his staff. Diagnostic sera are being prepared for all types of pneumococci, and a field bacteriologist will visit the various approved laboratories throughout

PNEUMONIA

Works Fast!

Good care at the beginning saves lives.

Delay in calling the doctor and the nurse may be fatal.
Every minute counts.

Self-prescribed medicines and the wrong kind of care often lessen chances of recovery.

*When PNEUMONIA Threatens,
Do Not Delay—*

SEND FOR THE DOCTOR

If you are a Metropolitan Policyholder—

SEND FOR THE METROPOLITAN NURSE

To call her:

1. Tell your Doctor, or—
2. Tell the Agent, or—
3. Telephone the Nurse, or the Nursing Association, or the Metropolitan Manager's Office.

METROPOLITAN LIFE INSURANCE COMPANY

Fig. 11.

loss of sleep, contact with others who have colds, etc.

With respect to methods of instructing the public, we can make use of all the usual channels for spreading information. Popular lectures and radio talks will be arranged. Already a series of popular articles on the subject of pneumonia are being prepared for publication in the daily press. This phase of the work is under the able direction of Mr. Dwight Anderson, Director of Public Relations Bureau of the Medical Society of the State of New York. Advertisements in magazines

the State and help directors organize and extend this special diagnostic service.

During the coming winter it should be possible for physicians all over New York State to have prompt, accurate and complete typing on all pneumonia patients. And they should not forget that when, as occasionally happens, no sputum can be obtained, the type can usually be determined from a throat swab, though it may take a little bit longer to make the determination by the swab method.

The third objective of the Committee will be to facilitate prompt nursing and efficient serum treatment, the latter to be achieved by supplying concentrated serum free or at a nominal cost to the physicians of New York State.

The nursing problem is one of the most difficult that the committee has to face. We believe, however, that if nothing more were accomplished by the committee than getting the patient with pneumonia under skilled nursing at an earlier date, we would have made a real step in advance. The average doctor is unacquainted with what he can have in nursing service, and the average layman is equally so. One of our jobs will be to inform both physicians and laymen concerning the service available from the Visiting Nurses' Association.

A few years ago Dr. Lloyd Felton of Harvard devised a method of concentrating and refining antipneumococcus serum. Since the publication of Felton's work, a considerable amount of investigation along similar lines has been carried out by the Division of Laboratories and Research in Albany under the direction of Dr. Augustus B. Wadsworth. As a result of these various investigations, practical methods for the concentration and refinement of antipneumococcus serum have been devised, and several of the biological manufacturers now prepare and distribute concentrated serum for both Type I and Type II pneumonia. A concentrated polyvalent serum against pneumococcus Types IV, V, VII, and VIII is being prepared by one of the biological manufacturers.

At the last session of the State Legislature, Commissioner Parran succeeded in getting a special appropriation for the manufacture of concentrated antipneu-

mococci serum by the New York State Division of Laboratories. The chief objection to the concentrated serum has been the expense attached to employing it on poor patients. This difficulty is now about to be removed. During the coming winter, any patient, rich or poor, who needs refined Type I serum can obtain it by having his physician make application for it through the proper channels. During the coming year the Division of Laboratories will focus their efforts on the preparation of concentrated Type I and Type II serum. Eventually, however, therapeutic sera will probably be available for several of the other more prevalent types.

With respect to the method of distributing serum, the Pneumonia Committee has not as yet reached any final conclusion, but it appears likely that serum will be issued to physicians by the director of the approved laboratory where the typing has been carried out. This would seem to be the simplest and most logical method of distribution.

So far nothing has been said about oxygen therapy. The cyanotic patient needs oxygen and needs it badly. Oxygen treatment by means of the tent is highly efficient, but the tents are expensive and require expert supervision. It appears probable, however, that eventually much cheaper and simpler methods of administering oxygen will be available. Oxygen, like serum, should not be postponed until the patient is as blue as indigo, but should be applied at the first indication of cyanosis and kept up thereafter without intermission until the patient's temperature reaches normal.

In conclusion, we can say that the modern serum treatment of pneumonia of certain types is practical, efficient, and almost entirely free of hazards if the necessary precautions against allergic and thermal reactions are followed.

Your Committee, in initiating this campaign, pleads for your enthusiastic cooperation. We have only one object in view, and that is a reduction in the pneumonia death rate. We can achieve that in only one way, and that is by working *with* and *through* the general practitioner.

RAYNAUD'S DISEASE: AN HYPOTHESIS AS TO ITS CAUSE

ARTHUR F. KRAETZER, M.D., *New York City*
Associate Attending Physician, Lenox Hill Hospital

While the author was associated as medical consultant with Throne, Myers, and Van Dyck in their investigation into the relationship between eczema and the retention of the heavy metals, particularly arsenic, the following hypothetical question propounded itself: for what conditions could chronic arsenic retention be a possible cause? Both Throne and Myers found arsenic in the urine of about 30 per cent of all cases of eczema. Of this group a large proportion recovered on removing the arsenic by intravenous injection of sodium thiosulphate.¹⁻⁶ In about 70 per cent of cases of infantile eczema Van Dyck found arsenic in the mothers' milk. In other words they established the widespread retention of arsenic as a fact.⁷

The presumable answer to the question stated is that chronic arsenic retention might be a possible cause in any disease of the sympathetic nervous system, the bone marrow or the liver, for all of which arsenic is a more or less specific poison. Arsphenamine-jaundice is a sufficiently frequent example of the last. As for the second, the occasional appearance of agranulocytic angina after salvarsan suggests that arsenic may conceivably be the exciting factor in that malady, even perhaps in the more frequent cases without so obvious a history.

Another suggestive fact is the slight but consistent decline in granulocytes following uncomplicated antisymphilitic treatment. The demonstrated ubiquity of arsenic retention, particularly in the United States, where such enormous quantities of lead arsenic are used so recklessly as sprays for fruits and vegetables, would seem to make such a suggestion worth following.⁸⁻¹⁰

Raynaud's disease lends itself admirably for test of application of the stated hypothesis, because of its clear definition and curious character. Lacking the elements of local infection, and having no characteristics ascribable to distant focal infection, the disease is unique. Its strange multiphasic manifestations suggest at the

very start, and with a high degree of plausibility, a drug-effect.

The first case was reported in *The Journal of the American Medical Association* for April 5, 1930.

A woman of 38, first seen October 7, 1929, reported trouble which started in February, 1929, at first limited to the terminal phalanges of the fingers but soon involving the entire length of both fingers and toes. The symptoms were classical, wax-like pallor in the cold, blackish-purple and intensely painful cyanosis on warming, with return to normal color in about a quarter of an hour. Since 1928 she had suffered from fatigue and had noticed that her perspiration had a garlic odor. Every spring since 1922 an intensely pruritic eczema would appear on the anterior surface of the wrists and last about a month. The attacks of Raynaud's disease kept up almost every day, cleared up in the spring, and recurred in October, when she came to the author.

She was first asked about her occupation. For the past three years she had done secretarial work; for fourteen years previously she had worked in a greenhouse. This led the author to conclude the problem solved, thereby betraying a deplorable and most unscientific optimism. It had been part of the woman's daily duties, year after year, to squirt Green Fly Spray over the plants, and she lived in a mist of arsenical solution.

Physical examination showed an undernourished woman who looked vaguely below par, tired and anxious. The skin of the face was tense and shiny, with numerous telangiectases, and the waxy almost atrophic appearance of the arsenic-eaters. There was a chronic itchy blepharitis, which it will be remembered, is another symptom of arsenic poisoning. The rest of the physical examination was negative.

The urine collected for twenty-four hours after intravenous injection of 1 gram of sodium thiosulphate showed .068 milligrams of arsenic per 100 grams of dried material. It was not tested for lead. The blood chemistry showed a low sodium chloride, 437.7; sugar 103.2; urea nitrogen 11.4; uric acid 1.98.

Treatment consisted of 1 gram of sodium thiosulphate intravenously twice weekly up

to February 3, 1930. During the first week of treatment the attacks were less frequent and almost lacking in pain although the color sequences were just as marked. This relief from the hitherto customary pain impressed the patient with the feeling that some profound change was taking place in her condition. Very soon another modification manifested itself. On October 19 and 25 there were attacks of local syncope changing back to normal color without the intermediate phase of asphyxia which had regularly been present.

The condition cleared up with an extraordinary swiftness a swiftness which gave reassurance in following the more tedious cases which came later. There have been no attacks whatsoever since the end of December, 1929, up to the time of this writing (February, 1934).

A fact which particularly impressed her as indicating cure was a simple experience. Whereas at times she had been able to go out in cold weather without getting an attack, she had never been able to drive a car in the cold without suffering one. The combination of cold plus gripping the wheel inevitably caused trouble. On Christmas, 1929, she drove her car in bitterly cold weather without gloves and had no attack whatsoever.

The next four cases were reported in the NEW YORK STATE JOURNAL OF MEDICINE for November 15, 1932, and are here summarized.

CASE II R. F., woman, aged 33. Attacks started in the fall of 1926 and consisted of the following series of manifestations in this order: 1. The ears turned dead white. The fingers turned pale but were not absolutely blanched. 2. The affected parts suddenly turned purplish red and there was a sense of swelling. Rubbing the parts caused itching. This lasted fifteen minutes to an hour. There was neuralgic pain which at times was intense and at times persisted after the skin had returned to normal color.

Cold seemed to precipitate the attacks, which occurred two or three times a day at first. Later on several months elapsed without an attack. Frequently during the attack there were uncomfortable sensations in the face and tongue. Constriction and a dependent position increased the pain. The woman had done a great deal of pruritus. Early in the course she took arsenic and thought that the symptoms were aggravated. In 1929 she took up gardening and used a great deal of lead arsenate. In the fall of the same year the attacks, temporarily less numerous, resumed their original

frequency and severity. The author first saw her in August, 1930.

Physical examination was negative except for chronic tonsillitis, chronic blepharitis, and dermatographia. The urine was negative. Complete blood-count was normal except for a mild anemia. The Wassermann was negative. The blood chemistry showed sugar 86.8, sodium chloride 441.8, urea nitrogen 13, uric acid 3.12. The urine collected twenty-four hours after intravenous thiosulphate showed .093 milligrams of arsenic per 100 grams of dried material, and 3 milligrams of lead in 1,000 cc.

Treatment was started August 9, 1930 and consisted of 5 grams of sodium thiosulphate intravenously twice a week. The following summary describes the course of the case: August 14—No swelling or redness. Slight aching in toes and fingers. August 18—Feels better generally. August 21—Tingling and some pain but no color change. Weather cooler. August 25—No finger symptoms. Tongue slightly sore. Feels stronger. August 29—No symptoms. September 1—No symptoms except slight burning of tongue. September 6—No symptoms. September 11—No symptoms. September 20—Fingers red and swollen on rising with slight aching pain instead of the severe and longer lasting pain that usually occurred. September 29—No symptoms. October 1—Weather quite cool. This morning very slight swelling and redness of fingers of left hand alone with very little pain. October 6—No symptoms. November 6—For past two weeks fingers have been numb on exposure to cold but without pain, swelling, or color change. This morning a characteristic attack, but mild and short lived. Patient is convinced that there has been definite improvement. December 4—No symptoms for the past four weeks in spite of exposure to severe cold. January 5, 1931—Mild attack, the first in the past two months. February 9—Free from symptoms. January 4, 1932—The patient had one slight attack on this date but with this exception passed through the winter without trouble.

There has been no recurrence up to the winter of 1934.

CASE III H. E., woman, aged 43, was first seen October 19, 1931. Her complaint was that every winter for three years, especially while driving a car, one or two fingers would turn dead white and tingle severely. On warming they would return to normal color without an intermediate phase of asphyxia. She had suffered from pruritus for seventeen years. At some time in the past she had been given two courses of

iron and arsenic injections. Two quantitative Marsh tests on the urine after thio-sulphate injection showed, one a trace of arsenic, the other .035 milligrams per 100 grams dried material. No lead was present. From October 19, 1931, to January 8, 1932, she was given two intravenous injections of thiosulphate a week. Improvement set in from the start. During this period, instead of the usual frequent attacks, there was but one and that merely the whitening of the tip of one finger on rising one cold morning. On January 8, 1932, she reported occasional slight tingling of fingers without color change while driving her car in the cold. She was discharged clinically as cured, and there has been no recurrence up to the winter of 1934. Incidentally the winter itch cleared up likewise.

CASE IV. E. M., woman, aged 25. First seen February 11, 1931. There was a history of taking tonics. Complaint: for two years, fatigue, anorexia, and inability to stand the cold. In March, 1930, just after coming in from outdoors, the terminal phalanges of the third and fourth fingers of the right hand turned dead white for a few minutes and then a deep red for a few minutes, finally resuming their natural color. There was no unusual sensation. The next attack occurred in the summer of 1930 while swimming. The terminal and middle phalanges of the right middle finger turned dead white with a sharp line of demarcation at the base. This lasted about five minutes and was accompanied by a sense of numbness. The two phalanges then turned a deep purplish red with a sense of tingling and burning but no real pain. This also lasted a few minutes and seemed to be brought to an end by vigorously shaking the hand.

Physical examination was negative except for the general appearance of fatigue and being generally below par. Poor peripheral circulation was indicated by the presence of marked livedo and acroasphyxia. The urine collected twenty-four hours after intravenous thiosulphate showed no lead but .154 milligrams of arsenic per 100 grams of dried material. She was able to take but two injections of thiosulphate but took it regularly in capsule form, five grains three times a day. On March 3, 1931, she reported that on stepping into a hot bath after a long walk in the cold, she noticed a tingling sensation in the soles with marked pallor. The color soon returned to normal without any intermediate stage of asphyxia. She said that after a month of thiosulphate by mouth she was feeling much stronger. In March, 1932, she reports that she had no

attacks though she went in swimming and was exposed to the cold. The general condition was greatly improved.

The attacks in this case were of course too mild and too infrequent to derive any conclusions as to the effect of treatment upon them. It is, however, not without significance that in this patient's case, as in the rest, arsenic was found in the urine and the general health improved greatly under thiosulphate.

CASE V. A. M., male, aged 30. First seen April, 1921. His complaint was fatigue. In 1913 in South America he had a penile sore which, without any investigation by dark-field or Wassermann, was treated with three injections of arsphenamine and ten of mercury.

Examination was negative except for coated tongue blepharitis, a mild secondary anemia and moderate acrocyanosis. In no significance of the last-named finding suggested itself.

By way of a thorough measure, iron and arsenic were prescribed, which the patient took for several weeks. From April 1921, to February, 1932, he was under careful observation for lues, but all findings, physical, blood, and spinal fluid have been negative.

Though not sick he has never felt very well. In May, 1931, he complained of increased fatigue and a sense of tingling in the feet and head. On a cold day the terminal phalanx of the right forefinger turned dark purple and felt numb. The feet felt numb and were very sensitive to cold. Tobacco seemed to intensify the sense of tingling. Intravenous thiosulphate was started May 7, 1931, but only a few injections were given. The urine showed .268 milligrams of arsenic per 100 grams of dried material. It was not tested for lead. The following notes were taken: *March 11, 1931*—The tingling had left the feet. It had left the hands temporarily and then returned in lesser degree. Still present in left temporal region and tended to shift over the scalp. *March 14*—Tingling markedly diminished. *May 18*—No tingling. Violaceous color of face less marked. *May 21*—No tingling. *May 30*—After prolonged swim, left index finger turned dead white for fifteen minutes and then returned to normal without asphyxia or paresthesia. Patient was free from symptoms until January, 1932, when there was a return of the tingling and sense of fatigue. Syncope of the terminal phalanx occurred once on a cold day. All symptoms responded promptly to thiosulphate.

As in Case IV, the Raynaud symptoms were too mild and too infrequent to base any direct conclusions upon. The association with these mild symptoms, however, of severe paresthesia, marked fatigue, plus a large amount of arsenic in the urine, capped by the clearing up under thiosulphate, certainly suggest that all the symptoms can be grouped under a common etiological head. It is possible that in this case an element of peripheral neuritis was present.

The following was first reported at a meeting of the Manhattan General Hospital.

CASE VI. C. P., an Italian woman of poverty-stricken surroundings, age 33, first consulted the author in April, 1932. From the age of fourteen to nineteen she worked at varnishing pencils, all colors of varnish being used. From nineteen to twenty she worked in a watch factory. Her trouble started in 1920, right after her marriage. Exposure to cold would bring on a slight pallor of the tip of the right forefinger. The condition gradually became more frequent and more severe. In the fall of 1928, shortly after the birth of a child, the trouble rapidly grew worse and in a few months involved all the fingers of both hands with the typical sequence of syncope and numbness in the cold and asphyxia on warming. The right index finger, the original site of the trouble, was always intensely painful during the asphyxial stage. The attacks were particularly severe and frequent during the winter, averaging three or four a day, but she never missed an attack even in the summer, when a damp day or washing clothes or dishes would inevitably precipitate one. It would take about an hour for the color to return to normal. Her husband was under treatment for syphilis and one child was highly suspicious for hereditary lues, though never was there any definite evidence of the disease detected in her. The physical examination was negative except for chronic tonsillitis, a healed apical pleurisy, and a probable mild hypothyroidism.

The urine before intravenous thiosulphate showed .018 milligrams of arsenic per 100 grams of dried material, a negligible amount. Twenty-four hours after thiosulphate the arsenic excretion jumped to .751 milligrams, an enormous amount, the contrast between before and after thiosulphate showing an extreme degree of retention. The lead in the urine was .065 milligrams per 1,000 c.c. before thiosulphate and .039 milligrams nine days later, after four thiosulphates had been given.

Treatment was started on April 25, 1932, and consisted of two intravenous injections per week of .5 gram thiosulphate. Within less than four weeks definite changes were manifest. The attacks were less frequent and when present were free from pain. She was frequently able to wash clothes and dishes without an attack of even color change, something which she had never been able to do before even in hot weather. From July 25, to October 20, 1932, treatment was interrupted by a therapeutic abortion and a stormy convalescence. On October 15, she had a severe attack with asphyxia and pain, the first recurrence of these symptoms in five months. For about a month prior to this attack she had been taking a tonic nostrum containing iron, copper, zinc, phosphorus, and manganese. From then on up to the time of this writing she has been treated in a more or less desultory way, her treatment being interrupted by various vicissitudes at home. The last painful attack occurred December 5, 1932. The condition has progressively improved, although she still (February, 1934) has occasional attacks of pallor. However, in spite of its being an exceptionally cold winter, the attacks are limited to two or three attacks of syncope of a few phalanges per week, without asphyxia and without pain and lasting from a few seconds to ten minutes, as against three or four daily attacks of all the fingers with asphyxia and severe pain and lasting an hour. Furthermore, she is no longer in dread of handling water. It is disappointing not to have been able to eliminate even these minor attacks of syncope after so long and tedious a course, but the improvement is unequivocal.

CASE VII. B. P., woman, aged 37, came under observation January 5, 1934. Her trouble started about 1924 with syncope of one finger, increasing in frequency and extent until several fingers of one or both hands were involved on going out into the cold. The attacks now show the following sequence: (1) Sense of cold; (2) numbness; (3) syncope; (4) aching pain; (5) deep purplish asphyxia with burning pain which frequently is severe enough to make her cry; (6) redness; (7) normal color. The pain may last half an hour and it usually takes that length of time for the fingers to return to normal color after going into a warm room. Driving a car always aggravates the attacks. The physical examination was negative. The urine showed .096 milligrams of arsenic before thiosulphate and .068 milligrams of lead twenty-four hours after thiosulphate. As a result of a mistake in the laboratory the usual procedure was missed.

The following is the course of the case: *January 5, 1934*—Thiosulphate No. 1. *January 12*—Very cold weather. Severe painful attack of five fingers. *January 15*—Thiosulphate No. 2. Very slight attack of pallor. *January 16*—Two slight attacks of pallor. No pain. *January 17*—No attack in spite of being out in cold. Appetite greatly improved. *January 18*—Thiosulphate No. 3. After prolonged exposure to cold, slight pallor of balls of two fingers, lasting but a few minutes. Slight burning on warming but no pain or asphyxia. Since first thiosulphate has had but one attack (*January 12*) with asphyxia and pain. All others limited to slight syncope returning to normal after a few minutes in a warm room. *January 22*—Thiosulphate No. 4. No attack since *January 18*. Slight attack this evening after long walk in cold; five fingers white five to ten minutes; no pain, burning, or asphyxia. *January 23*—No attack. *January 24*—Thiosulphate No. 5. Slight pallor of three fingers after long walk in cold, followed by almost imperceptible mottled, not solid, asphyxia, returning to normal in a few minutes without pain or burning. *January 29*—Thiosulphate No. 6. No attack until this day. Weather bitterly cold. Two attacks of syncope of ten fingers with tingling and return to normal in a very few minutes without pain or asphyxia. At night, after standing half an hour in intense cold, very severe attack like the usual former ones but not lasting so long; pallor for one-half hour with severe pain for fifteen minutes. *January 30*—One attack of slight pallor with prompt return to normal. *January 31*—No attack. Out all day. *February 1*—No attack. *February 2*—No attack despite prolonged exposure to cold. Patient remarked what Case VI also noted, that for a few hours after an injection of thiosulphate there was an increased tendency toward attacks followed by a definite cessation. This is probably explained by the increased mobilization of arsenic deposited immediately after thiosulphate. *February 3*—Out all day in cold. Slight pallor of two phalanges in evening, lasting five minutes. *February 4*—No attack. *February 5*—Very slight pallor of two phalanges lasting two or three minutes. *February 6*—Thiosulphate No. 7. Slight indefinite pallor of three fingers clearing in two or three minutes. No pain for a week. Constant exposure to severe cold. Feels better generally. *February 6 to February 16*—Occasional slight pallor. *February 16*—Thiosulphate No. 8. Marked pallor followed by faint cyanosis without pain on going out into severe cold one-half hour after injection. *February 19*—Thiosulphate No. 9.

Slight pallor this evening. No other attack since *February 16*, despite exposure to bitterly cold weather.

This case is still under treatment. Nine injections of thiosulphate in seven weeks—a highly insufficient amount, by the way—have changed the picture from one with three to four severe daily attacks, with asphyxia and intense pain, to one with about three incomplete and short-lived attacks per week of pallor with neither pain nor asphyxia.

A few technical points may be brought out here. Presence of arsenic in the urine before thiosulphate may be of no practical significance. It may simply represent the normal elimination of recently acquired arsenic in people able to excrete it. Absence of arsenic before the first thiosulphate, followed by presence of arsenic within twenty-four hours after thiosulphate, is of very decided significance, for it shows the existence of an arsenic-retention. Thiosulphate should be given intravenously twice a week in doses of .5 gram freshly prepared from highly purified crystals. Solutions already made up in ampoules are not so reliable. The material used in these cases was Sulfactol (Metz).

In their long series of eczema cases Throne and Myers have shown that after a considerable series of injections, improvement may stop and there may even be a regression. They have found that this is associated with an alkalosis and during this phase excretion of arsenic ceases. This refractory state is corrected by a few intravenous injections of calcium salts, whereupon thiosulphate may be resumed. This curious fact may have some bearing on the mysterious question as to why some people retain arsenic and get into trouble, whereas others excrete it immediately following its intake.

Another interesting point brought out by Throne and Myers is the change in the blood chemistry when metallic retention is present. Using the Hastings-McLean technic for blood-sugar determination, they consider anything above 100 milligrams per 100 c.c. to be high, and call particular attention to the sodium chloride-sugar ratio. On this basis the ratio is normally five to one. In cases of metallic retention it approaches four to one, the sugar being raised and the sodium chloride being lowered. In addition, the urea-nitrogen tends to be low. Presumably

these changes are due to impairment, respectively, of the glycogenic and urea-forming functions of the liver. There are occasional cases of chronic metallic retention where there is no shift of the sodium chloride-sugar ratio toward four to one, but when this shift is present a metallic retention can be predicted with considerable certainty.

Summary

Seven cases of Raynaud's disease treated with sodium thiosulphate are presented, six female, one male.

Case I Severe Duration nine months. Urine after thiosulphate showed 068 milligrams of arsenic. Not tested for arsenic before thiosulphate. Not tested for lead. Treated ten weeks. Clinically cured. No recurrence in five years.

Case II Severe Duration four years. Urine after thiosulphate showed 093 milligrams of arsenic and 3 milligrams of lead. Not tested before thiosulphate. Treated eighteen months. Clinically cured. No recurrence in two years.

Case III Moderate Duration three years. Urine after thiosulphate showed 035 milligrams of arsenic and no lead. Not tested before thiosulphate. Treated three months. Clinically cured. No recurrence in two years.

Case IV Mild Duration one year. Urine after thiosulphate showed 154 milligrams of arsenic and no lead. Not tested before thiosulphate. Treated for several months with thiosulphate by mouth, only two intravenous injections. One slight recurrence in March, 1931. No further recurrence in three years.

Case V Mild Duration one month. Urine after thiosulphate showed 268 milligrams of arsenic. Not tested for lead. Treated for one month. No recurrence in three years. The only male case in the series.

Case VI Severe Duration twelve years. Urine showed 018 milligrams of arsenic before thiosulphate and 751 milligrams within twenty-four hours after. Lead present before and after thiosulphate. Treated irregularly for twenty-two months. Marked improvement. Still has minor attacks of pallor, but no pain or asphyxia for over a year.

Case VII Severe Duration ten years. Urine showed large amounts of arsenic

and lead. Treated irregularly for past seven weeks and still under care. Marked improvement. Attacks now limited to less frequent, less severe and much shorter episodes of pallor, with no asphyxia or pain.

All of these cases showed a marked improvement in general health.

A Note On Definition

Just what is Raynaud's disease? Some would deny that mere syncope of a single terminal phalanx would justify the diagnosis. Other even more rigorous believers in the written word would insist that it is not Raynaud's disease unless it conforms to its so called synonym, symmetrical gangrene of the extremities. The generally accepted view, however, is that the cases herein reported fall under the author's heading. The fact that in these cases the first symptom was syncope, to be followed months or years later by the classical series of events, including asphyxia and pain, would obviously point to the difference being merely a matter of degree. This is most emphatically borne out by the fact that as the cases progressed toward recovery, the last symptoms to appear, asphyxia and pain, were the first to clear up.

Conclusion

It is a risky thing to draw conclusions from the *post hoc propter hoc* argument of "before and after taking." The path to hell is paved with undistributed middles as well as with good intentions. But the unbroken sequence of seven cases of the triplex coincidence of Raynaud's disease, presence of arsenic and cure or marked improvement on removing the arsenic, would certainly suggest that the thesis of this article is justifiable at least as a working hypothesis. Three common factors repeated seven times in a row should seem to amount to something. Some may raise the objection that in all the hundreds of thousands of people who have received salvarsan, no case of Raynaud's disease has been reported. The reply to this is that it is pentavalent arsenic which has the greater tendency to be retained in the body. Trivalent arsenic which is what composes salvarsan, is much more readily eliminated.

Doubtless certain constitutional elements play a part. Of these most certainly sex is one, for Raynaud's disease is much more prevalent among women than among men. And there may well be others. The doctrine of the parsimony of

causes falls down in the field of pathology. But whatever complex aggregate of factors is involved in Raynaud's disease, it is suggested that arsenic—or at times, possibly, lead—is the *sine qua non*.

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References

1. Throne, B., Van Dyke, L. S., Marples, E., and Myers, C. N.: Arsenic as an Etiological Factor in the Genesis of Eczema, *NEW YORK STATE JOURNAL OF MEDICINE* 26:843, 1926.
2. Marples, E., and Myers, C. N.: Action of Sodium Thiosulphate in Treatment of Metallic Intoxications and Lesions of the Skin, *Proc. Soc. Exper. Biol. & Med.* 24:39, 1926.
3. Throne, B., Van Dyke, L. S., Marples, E., and Myers, C. N.: Treatment of Arsenical Eczema, *NEW YORK STATE JOURNAL OF MEDICINE* 26:970, 1926.
4. Muller, E. F., Metz, G. P., and Myers, C. N.: Arsenic Lesions of the Skin, *Arch. Dermat. & Syph.* 15:186, 1927.
5. Throne, B., Van Dyke, L. S., Marples, E., and Myers, C. N.: Arsenic Findings in Dermatological Conditions, *NEW YORK STATE JOURNAL OF MEDICINE* 27:757, 1927.
6. Throne, B., and Myers, C. N.: Psoriasis, *NEW YORK STATE JOURNAL OF MEDICINE* 28:914, 1928.
7. Myers, C. N., and Cornwall, L. H.: Normal Arsenic and Its Significance from the Point of View of Legal Medicine, *Am. J. Syph.* 9:647, 1925.
8. Myers, C. N., Van Dyke, L. S., and Throne, B.: Arsenic as a Problem in Present-Day Public Health Management, *M. Times, New York* 57:134, 1929.
9. Myers, C. N., and Throne, B.: The Relation of Arsenic to Public Health, *NEW YORK STATE JOURNAL OF MEDICINE* 29:871, 1929.
10. Health Hazards from the Ingestion of Small Amounts of Metals, *Ibid.* 29:1258, 1929.

THE GLAND PRODUCT CRAZE

No group of pharmaceutical preparations in recent years, perhaps, has been the subject of such extravagant claims, remarks Dr. Morton S. Biskind, of Chicago, in the *A. M. A. Journal*, as that comprising allegedly active materials derived from various glands, nonglandular organs, and body fluids. Hardly a tissue or fluid of the body has escaped desiccation or extraction; substances so obtained are marketed in pills, tablets, capsules, vials and ampules for introduction into the body by every conceivable route.

Only a small percentage of the many preparations are known to contain active material; and with the few exceptions (thyroid, liver, stomach, adrenal cortex and some estrogenic principles) the products administered by mouth have little effect even if they do contain some active principle or principles. The active substances are either destroyed by the digestive juices or, if not broken down, they may not be absorbed from the intestine. Thus, glandular therapy by the oral route is in general quite limited; even when effective it is usually wasteful, as much more material must be used owing to poor absorption. However, when dealing with relatively impure products that may have toxic effects on parenteral injection, it may be preferable to administer the preparation orally, if feasible. An example of this is adrenal cortex extract. Purification, particularly important

for preparations intended for parenteral use, involves many difficulties.

Assay involves still further difficulties. The majority of methods employed are biologic; the effect of a given preparation is determined on some physiologic function in a test animal. At best biologic assay entails very large errors. Much confusion arises from the present deplorable state of endocrinologic nomenclature; this is particularly true with respect to commercial products. Not infrequently the physician is confronted with a series of products purporting to be similar but sold under widely different names or with other products unquestionably different but marketed under similar names.

The author describes various commercial glandular products, mentioning well known substances described in the U. S. Pharmacopeia or in New and Nonofficial Remedies briefly or not at all. Emphasis is placed on the more important products marketed in the United States. He concludes that clinical applications of many of the newer commercial glandular products are on a very unsatisfactory basis. Physicians, particularly those who do not have facilities for controlled clinical observation, would do well to be guided by the judgment of the Council on Pharmacy and Chemistry in the use of these products. The advertising propaganda of pharmaceutical manufacturers cannot be depended on as a safe guide in this respect.

CANCER OF THE BREAST

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We have studied the case histories on the 180 malignant tumors of the breast admitted to the Strong Memorial and the Rochester Municipal Hospitals from 1926 to 1934. Radical operation was performed on eighty of these patients; palliative operation on fourteen. Of these eighty-six were so advanced that operation was not considered. These patients were given palliation whenever possible by radiation or drug therapy. During the same period of time, there was operative removal of ninety-two benign tumors of the breast. These records were also reviewed. Two groups of patients with lesions in the breast have not been assembled as it was difficult to trace them. These include the unquestionably benign growths, which were not operated upon; and the patients who presented themselves for examination for a supposed lump in the breast which could not be located on examination. These two latter groups make up a fairly good number of patients. They present a difficult problem to the physician as he must assume a grave responsibility. Repeated examinations at stated intervals should be insisted upon and carefully conducted in this class of patients so that early lesions may not be overlooked.

The age incidence for malignant tumors of the breast follows in general that for malignancy elsewhere. The majority of patients fall in the 40 to 70 age period. There are always in any series exceptions which prove interesting. In our cases, there were eight patients with cancer of the breast who were under 40 years of age; viz., 29, 30, 33, 33, 34, 36, 38, and 38, respectively. There were also three above 70, a Christian Scientist of 78, for whom a radical operation was performed, and two other women with breast cancer at 81 and 84 years, respectively.

The male sex is by no means immune to tumors of the breast. In our group, there were two patients with cancer, both of whom also had syphilis; and nine

benign tumors, the commonest of which was fibroadenoma, five times. Cancer, in the male in our experience, here and elsewhere, is always a serious condition. It should be relatively easy to find these tumors early but the spread seems to be rapid even when the tumor is small.

In regard to etiology we will not enter into a discussion of the factors supposed to have a bearing such as lactation, stagnation, and so forth. We have been much interested, however, in the frequency with which trauma has been mentioned by our patients with breast tumors. Trauma to the breast cannot be very uncommon in women. The breast, struck against some object with sufficient violence to be recalled, was a possible cause for the swelling in fifteen cases of malignant tumors; and in eight cases of benign growths. The relation of trauma to breast cancer only assumes etiologic importance from the fact that it may have a medicolegal bearing. In two of our patients with malignant breast tumors, the claim was made that the breast was injured when the patient was thrown against the seat of a trolley car.

No student of the cancer problem today assumes a single etiologic factor to be operating in any neoplastic disease. There is always the hereditary predisposition, about the mechanism of which even the geneticists are not in agreement. And there are time factors and repeated irritation factors, misplaced cell rests, endocrine imbalances, and so forth, all of which may have a bearing.

In order to establish that a single trauma has even a contributory relationship it is necessary to prove, *first*, that a sufficiently severe trauma actually occurred (one patient said that she had bleeding from the nipple following trauma); *second*, that the breast was normal before or immediately at the time of the accident; *third*, that the localization of the neoplasm be reasonably close to

the injured area; *fourth*, that a proper time interval elapse between the time of the accident and the development of the new growth; *fifth*, that the histology of the tumor conforms to the time relationship, i.e., a slow growing tumor which appears in a very short time after the injury or a rapidly growing tumor which appears after a long time would not seem logically to have any connection with the trauma. Furthermore, a tumor such as a dermoid cyst would at once be recognized as a congenital defect.

It is obviously almost impossible to fulfill these conditions in any given case. Experimentally, also, it has never been possible to produce a cancer by a single trauma. There is even evidence that single traumas may favorably affect a growth by damaging the blood supply but any such supposed advantage is more than offset by the danger of metastasis. It has been experimentally proved that rough handling or massage of malignant tumors is followed by generalization in a high percentage of cases.

In the examination of the breast for a suspected tumor it is advantageous for every physician to work out a method which will be thorough. It is our practice to have the patient strip to the waist so that both breasts can be inspected at the same time. With the patient sitting upright, a careful inspection is made for differences in the contour of the breasts. The level of the nipples is contrasted on the two sides. Increased vascularity or inflammation over any area is noted. The nipple on one side may be retracted; or fissured; or there may be signs of caked secretion indicating discharge. A visible tumor is occasionally seen bulging in some part of the breast; and definite dimpling or thinning out of the skin may give evidence of underlying trouble.

The patient is then asked to recline on the examining table with both arms above the head. This allows excellent observation of the axillae and it may also bring out puckering in the skin over a tumor. Palpation is then carried out, the normal breast being examined first in order to determine the normal for the individual in question. The flat of the hand is used to gently feel over the whole breast. Then, by moving the fingers alternating up and down as in using a typewriter, the breast

is covered in smaller zones. The normal breast having been palpated and its characteristics noted in the mind of the examiner, the examination of the involved side is then conducted in the same fashion. The nipple zone and areola are not examined till last as palpation in these areas may set up engorgement in other zones of breast tissue. The axillae and the supraclavicular regions are also given careful attention, especially the glands low on the jugular under the insertion of the sternomastoid tendons.

In some individuals with heavy breasts the only way to detect a small mass is by palpating the breast tissue through small areas by gently feeling the edges between the thumb above and the fingers below. If a tumor is made out its characteristics should be determined. This includes the contour, smooth or irregular; the consistency, hard, semielastic, soft; the fixation, freely movable, relatively fixed, so that the skin or nipple is retracted on moving the tumor or on lifting the breast below it; or absolutely fixed, so that the whole breast is anchored at some point. Fibroadenomas, for example, can be diagnosed by their mobility. These tumors feel smooth, elastic, and slip away from the examiner, often moving several centimeters. This characteristic makes it difficult to remove them under local anesthesia unless measures are taken to secure them in position in some way under the procainized skin. The tense cysts of fibrocystic disease will also seem to move on the underlying chest wall, but if the lesion is fixed on either side, it is seen to be the movement of the breast itself and not the tumor.

Of course, it is needless to emphasize the general thorough history and physical examination when a tumor is palpated and a radical operation may be contemplated. The history should be sure to cover such points as headache, backache, neuritis pains, cough, and so forth. The physical examination should include a hemoglobin and red-cell count. Roentgenograms of the chest should always be taken under such circumstances.

If patients with cancer of the breast were coming to us in the ideal earliest stages, no one would be able to make a diagnosis without looking at the tumor. All such cases would have to be subjected

to operation and the diagnosis would rest on the gross or microscopic picture of the tissue involved. Unfortunately, we rarely, as yet have had this Utopian dream realized. In a general surgical clinic such as we have, the diagnosis of the nature of the tumor of the breast can, with few exceptions, still be made by the ordinary methods of physical examination. The earliest cases we see give a history of accidental discovery of a painless nodule. On examination, it proves to be hard, irregular, and shows dimpling or increased vascularity of the skin over it.

The newer methods of transillumination, soft roentgen ray pictures of the breast, and breast skin prints have helped us confirm our clinical diagnosis in many instances. But in the doubtful cases they have misled us as often as they have helped. Transmission of light through a tumor does not always mean that it is cystic. In fact it has been embarrassing to demonstrate to medical students transmission of light through two tumors, which clinically we all believed were solid, and to assure the class that this meant tense cysts, only to find them solid fibroadenomas on removal. In two other cases we have been influenced to do radical operations on benign lesions because soft tissue roentgen ray examinations were reported as cancer. Possibly in time, these methods of examination may be worked out so that they may be of help. It is certain, however, that they will never supplant the information which must be gained only through physical examination. At the present, in our hands they are useful as supplemental examinations, and in no way surpass the clinical estimation of the nature of the process.

At this point it might be well to call attention to the fact that physicians connected with the large hospitals are constantly missing opportunities to do good preventive medicine for their patients. The routine examination of the breast is either not done at all or in such a perfunctory manner as to be worthless. The records bristle with long descriptions of heart and lung sounds which often mean nothing to the life of the patient, whereas, a nodule overlooked in the breast may lead to the most serious consequences. This failure to examine the breasts may represent a hangover from the Victorian

age when such things were to be approached with great embarrassment to all concerned. The failure to make this examination is not confined to any one service because all services fail equally in it. *It should be a rule that no female patient over 35 years of age should be discharged from any hospital until a routine examination of the breasts has been made and recorded.*

There have been some examples in our series where tumors, both benign and malignant, were discovered within a short time after the patient had left a hospital where a thorough examination should have been done. Human nature being such as it is, it is futile to expect that women are going to have periodic examinations for cancer of the breast or elsewhere. The only hope for getting early lesions is by taking advantage of the chances offered, until some dictator can make such examinations compulsory after a certain age.

In the average hospital case of cancer of the breast which comes to operation, the surgeon can be reasonably sure of his diagnosis from the history of growth in size, and so forth.

It has been considered necessary by the operating surgeon to cut down on the tumor for inspection or removal in only eight of our cancers of the breast. In seven of these the diagnosis of cancer was made correctly on gross examination alone; and in the eighth case it was considered probable cancer. Frozen section confirmed this diagnosis and was used in but two of the other cases to bolster the surgeon's judgment of his gross diagnosis.

In the case of the benign tumors more mistakes have been made but fortunately in the right direction. Some cases have presented such outspoken malignant characteristics on examination that radical operation has been done without question. There have been six cases with single, large, hard, irregular masses fixed to the skin or nipple which have been considered cancer clinically and have had radical operations performed. The fixed sections showed them to be chronic cystic mastitis in two instances; fibroadenoma in two cases, one in a man with inflammatory fixation of the skin; a peculiar acute and chronic inflammation with giant cells in

one case; and lipoma of the breast with pig skin appearance, fixation and a visible hard lump in another case.'

In one case an exploration was done, the tissue removed, and frozen section diagnosis of cancer was made. When the fixed sections were obtained there was marked papillary cystadenomatous change in a chronic cystic mastitis.

In two instances, the roentgen ray diagnosis so supported the belief of the clinician that he did a radical for intracanalicular fibroadenoma and chronic cystic mastitis, respectively—large single masses with signs classed as malignant. In one last instance, biopsy was suggested by the attending surgeon as the lesion was doubtful but a radical was performed by the operator for adenoma of the breast.

These ten cases indicate that diagnosis cannot always be certain even in the presence of attachment to the skin, dimpling, retraction of the nipple, and firm irregular masses. Several other in-

stances of similar clinical conditions were recognized by biopsy of the involved area before proceeding with the radical operation which was thus avoided.

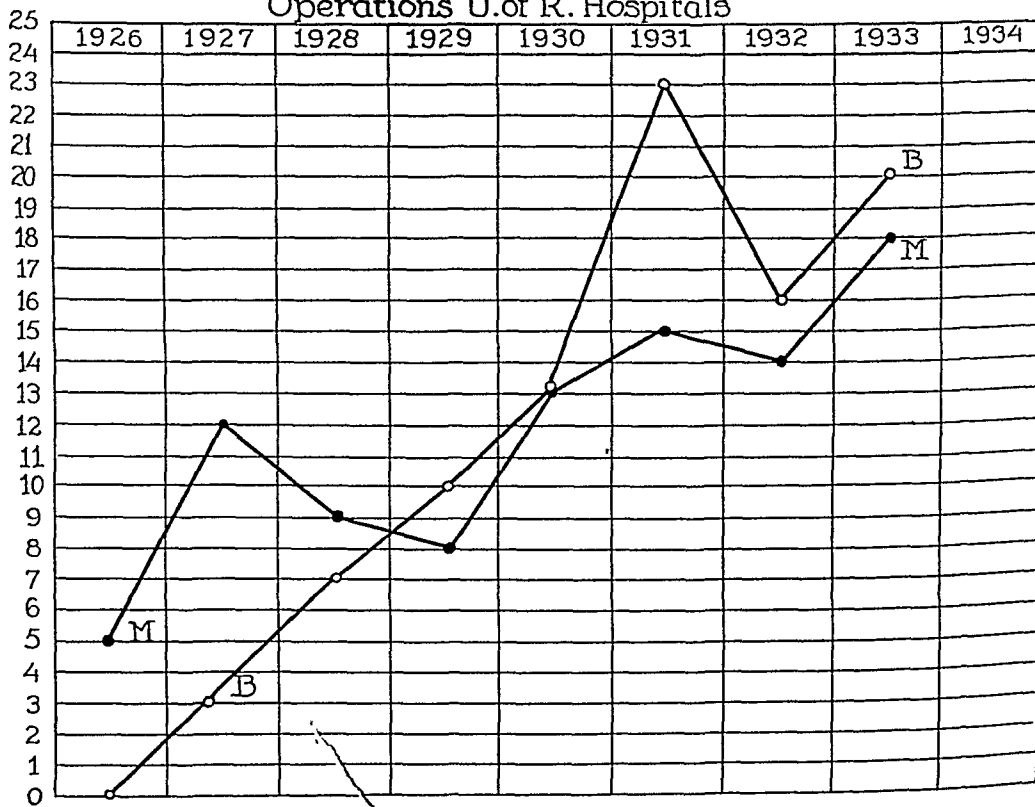
In only three instances have we done simple mastectomy where the lesion was clinically benign but pathologically suspicious on fixed section. In one an intracystic papilloma had invaded the basement membrane, and in two others there were suspicious cellular areas. When a frozen section or gross examination is doubtful we do not do a radical operation as it has been our experience that fixed sections in these cases are generally benign.

It is our practice in lesions of the breast to excise the suspected area with a margin of normal tissue, not seeing the tumor at any point if possible. Then the excised tissue is cut open by the surgeon and a gross inspection made. In almost every instance it is possible to make a diagnosis in this manner if the surgeon is familiar with the pathology of the breast as he

CHART

The operations for malignant and for benign breast tumors are indicated in this chart. More patients with benign lesions are seeking advice than formerly.

Operations U. of R. Hospitals



should be. If the lesion is benign the operation is thus finished by simple closure of the incision. If the tumor is malignant there is not the same danger of squeezing out malignant tissue juice and cells from the incision, even though closed, in the manipulations necessary to remove the breast radically. We have had no experience with needle or punch biopsies. Perhaps these methods would save a few unnecessary radical operations if they were used indiscriminately in all breast tumors. These procedures do not appeal to us for the small doubtful cases where in such instances a negative report would not be convincing.

We do not propose to discuss here the pathological picture in cancer of the breast. There are many interesting questions still to be solved such as the sweat gland cancers and sweat gland epithelium in breast tumors. It is well to know that these pale cells do occur and that their origin is in debate. We have the feeling from observing our cases that scirrhus carcinomata are not so well held in check as the more cellular types. We look upon them as very treacherous types of lesion when once they have escaped from the local area. We have been very much interested in the rather frequent association of cancer and chronic cystic mastitis in our cases. In eight instances this has been striking in the gross and microscopic examinations. We believe that this indicates that a woman who has bilateral chronic cystic mastitis should be carefully followed by her physician from time to time, and not dismissed. It is our conviction that she is just as likely as any other woman to have a cancer arise in her breast.

We think that women are coming to the doctor more often for lumps in the breast than they were ten years ago. A

chart of our operations for benign and malignant tumors indicates that this is so because we now operate on more benign than malignant tumors and the reverse was true previously. (See Chart.)

In treatment we believe that the results are not so good that one can afford to neglect anything which may help combat this disease. There can be no compromise with cancer. If the tumor is operable we favor radical operation to be followed by radiation. We do not believe in pre-operative radiation as a general principle for several reasons. It leads to unnecessary delay in getting rid of the focus of disease. It often makes the patient sick and in poorer shape to stand the operative procedure later. It definitely hurts the morale of a good many patients who are worried and discouraged because the growth does not disappear. And it exposes a certain number of patients to unnecessary inconvenience and expense because they do not have cancer, although the clinical diagnosis has been such. Two of our benign tumor patients for whom radical operation was done had previously been subjected to a course of preoperative radiation. In two other instances the benign character of the lesion was recognized after a course of radiation and relief was obtained by removal of the benign tumor.

We radiate our patients postoperatively and follow them up as closely as we can though we still lose track of some. If the case seems favorable for cure we push radiation to its effective limit. If the patient seems to have a hopeless prognosis, it is not good medicine to take away her comfort by useless therapy.

It would be of the greatest value if some clinic would run a series of patients under the conditions as we see them today without any radiation at all. The end

TABLE

	Probable malignancy	Now living	Now dead	Cannot trace	Outspoken malignancy	Now living	Now dead	Cannot trace	Biopsy or palliative op only
1926	1	1	—	—	4	—	4	—	3
1927	3	2	1	—	9	4	5	—	3
1928	1	1	—	—	8	2	3	3	—
1929	1	3	—	—	5	—	4	1	4
1930	1	1	—	—	12	—	8	4	1
1931	1	1	—	—	12	4	8	3	2
1932	1	2	—	1	11	8	3	—	4
1933	3	3	—	—	15	14	1	—	—
Totals	18	16	1	1	76	32	31	11	17

results might show just exactly what radiation contributes to this problem. We believe that surgery and radiation can give a much higher percentage of arrest of cancer than they have, if the patients can be seen before they are outspoken cases of cancer. The accompanying table shows a marked difference in the results when operation and radiation have been used for cases which were probable cancer as compared to that obtained when there was no doubt about it.

Conclusion

There is a surgical principle which applies to ulcerating and infected breast cases. It is the same principle which we use in amputations when there is infection in the limb. It is just as important to leave the breast wide open without any attempt at closure when there is an infected area in it as it is to do a guillotine amputation when there is infection in the tissues below.

18 AUDUBON STREET

"MEDICAL BUREAUS" THAT EXPLOIT THE POOR

Instead of the spirit of helpfulness that should inspire everyone during hard times, it is peculiarly shocking to find people willing to lower themselves and their professions by exploiting the poor. So remarks Dr. Morris S. Bender, President of the Queens County Medical Society, in an interesting article in the *Long Island Press* (Jamaica). What rouses this caustic remark is "the so-called medical bureau," owned and controlled by lay individuals. The plan of these lay bureaus is to maintain solicitors and canvassers who enroll groups and families at an average charge of 10 cents per week per person. This amounts to from \$5 to \$7 per year per family.

For this fee the subscriber is entitled to nothing except a pamphlet which lists an enrollment of physicians with this medical service bureau. These physicians receive no compensation and are to render medical service free of charge.

Now, here's the catch. Their reward for service rendered is obtained through the sale of medications which they carry in their kit. Each sale amounts to approximately one dollar. All surgical or obstetrical work or any cuts or bruises treated must be paid for, even though no medication is furnished.

Picture a doctor in this modern day as a walking drug store, giving you exactly what you need in the event of any illness. Medical service bureaus bear no responsibility except the raking in of enormous sums from the gullible public.

The doctors who enroll in the medical service bureaus unfortunately are compelled to do so by circumstances, often by lack of medical patronage because of the competition of just such service bureaus.

The quality of the physician rendering this service may be very good and frequently is bad. However, if a doctor is good to begin with, it does not take long for him to deteriorate when he has to work

for nothing. There is a definite economic law that services rendered are worth exactly what they cost.

Through legal technicalities, among which is the usual incorporation as a business bureau instead of a medical bureau, these frauds continue to operate from year to year. They cannot properly care for the sick under their set-up and operate only at a terrible expense to the poor.

Doctors worthy of the name will not debauch themselves or cheat the people they serve by listing themselves in such a roster as the medical bureaus. As a matter of fact, any physician affiliated with the bureaus in question is barred from membership in the American Medical Association and the State and County Medical Societies.

People should carefully investigate the merits of these bureaus. Then they should remember that their health demands attention more than their pocketbooks, for without the health, the pocketbook will suffer.

These so-called service bureaus have been a blot on the State and City Health Departments and upon the profession for many years. There are two ways of eliminating them—by legislation and by the public's refusal to patronize them. Medical societies are doing their best to have the bureaus outlawed legally. It is up to the public to help force them out by making it unprofitable for them to operate.

The substance contained in liver which is responsible for its effectiveness in the treatment of pernicious anemia has been announced isolated by Dr. H. D. Dakin and Dr. Randolph West, at Presbyterian Hospital in New York City.

The substance, described as "appearing to be proteid in character" is obtained from liver extract through the use of a highly specialized process of precipitation. It has already been used clinically at the hospital, and many cases responded "markedly."

ACOUSTIC NEURINOMAS IN THE STAGE OF NORMAL INTRACRANIAL PRESSURE

An Analysis of Thirteen Early and Late Cases

WALLACE B. HAMBY, M.D., *Buffalo*

In his monograph of 1917, Cushing¹ outlined the sequence of symptoms caused by acoustic tumors. The symptoms in the average case occur more or less in the following stages: (1) the auditory and labyrinthine manifestations; (2) the occipitofrontal pains with suboccipital discomforts; (3) the in-co-ordination and instability of cerebellar origin; (4) the evidences of involvement of adjacent cerebral nerves; (5) the indications of an increase in intracranial tension with a choked disc and its consequences; (6) dysarthria, dysphagia, and finally cerebellar crises and respiratory difficulties. Little has been added to the knowledge in general of the symptomatology of these tumors since this statement was made, but that knowledge has been diffused among the profession so that the lesion is being recognized more frequently in the stages preceding increased intracranial pressure. In discussing the mortality rate of operations upon these lesions, Cushing expressed the hope that in the future we might see these patients operated upon at a period at least two years earlier, on the first signs of general pressure symptoms, lessening postoperative morbidity as well as mortality rate.

In his report he presented case histories of thirty patients, all of whom exhibited signs of increased intracranial pressure. Great numbers of individual cases have been reported since that time, and in a later publication Cushing² listed one hundred and fifty other cases of the lesion from his series of operations. There has appeared no report of the incidence of early cases in a series of recent operations for acoustic neurinomas.

In a series collected between 1930 and 1935 were sixteen cases of acoustic neurinoma. Three of these were diagnosed

clinically as bilateral acoustic neurinomas and were not operated upon; they were omitted from the studies. The remaining thirteen cases were histologically verified acoustic neurinomas, or perineural fibroblastomas of the eighth cranial nerve. Other cerebello-pontine angle tumors, gliomas, meningiomas, etc., were also excluded. Eight of these patients had increased intracranial pressure, four were operated upon in the stages preceding intracranial pressure, and one (5) was a borderline case. The criteria of increased pressure used in making this separation of cases were: (1) choked disc; (2) measured spinal fluid pressure exceeding 200 mm. of water; (3) the presence of hydrocephalus detected by encephalography or ventriculography; (4) evidence of increased intracranial pressure obtained by ventricle puncture at the time of operation. The borderline case mentioned had a spinal fluid pressure of 200 mm. of water and the ventricles were not drained at encephalography because of a foramenal block, but ventricle puncture did not show the ventricle to be dilated, nor was the fluid under increased tension. In the analysis it has been included in the group preceding increased intracranial pressure. For convenience of description these patients have been divided into two groups (Tables 1 and 2): Group I, those with no increase in intracranial pressure, and Group II, those with increased intracranial pressure.

Since the lesion develops within the substance of the acoustic nerve and grows without early destruction of its fibers, irritative phenomena of either the cochlear or vestibular division usually are noticed early in the anamnesis. Theoretically, the earlier the stage in which the tumor is found, the shorter should be the

Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 14, 1935. These cases are presented through the kindness of Dr. W. Jas. Gardner from his service at the Cleveland Clinic, Cleveland, O.

TABLE I.—INITIAL SYMPTOMS AND CRITERIA OF CLASSIFICATION INTO GROUPS.

		Evidence of Increased Intracranial Pressure											
		Vision		Lumbar Puncture				State of Ventricle		Size of Tumor (cm.)	X-Ray		
Duration of Symptoms	First Symptom	Diminished	Blind	Edema of Discs	Pressure (mm. of H ₂ O)	Tobey-Quekstedt	Pandy Test	Total Protein (mg./100 c.c.)	+ or -			V.P.	
Group I													
I	4yr.	Neuralgia	0	0	0	190	0	+	230	0	V.P.	4x6	+
II	8yr.	Tinnitus	sev. mo.	0	0	130	0	0	30	0	EOG	1x1	
III	2yr.	Vertigo	0	0	0	114	0	0		0	V.P.	2.5x3	0
IV	4yr.	Deafness	6wk.	0	0					0	V.P.	3x4	0
V	9mo.	Vertigo	0	0	0	200	0	v.f.t.	35	0	V.P.	3x4	0
Group II													
VI	2yr.	Vertigo	2mo. 1mo.	+	600		+			Hydroceph.	VGM	Very large	0
VII	2yr.	Headache	1yr. 7mo.	+	470		+		227	Hydroceph.	EOG	Very large	0
VIII	2yr.	Headache	6mo. 0	+						Hydroceph.	V.P.	Very large	
IX	3yr.	Tinnitus	0 0	+						0	V.P.	3x3	+
X	7mo.	Vertigo	0 0	+	340	trace xantho			65	Mild Hydro.	VGM	1.5x2.5	
XI	2yr.	Vertigo	oco. 0	+						Hydroceph.	V.P.	4x5	
XII	2yr.	Tinnitus	1yr. 0	+	450	trace xantho			700	Hydroceph.	V.P.	4x5	
XIII	2yr.	Occip. Pain	4mo. 0	+						Hydroceph.	V.P.	2.5x3.5	0

The Wasserman reaction was negative in all fluids. Cell counts and colloidal gold curves were not remarkable.
 V.P. indicates Ventricle Puncture at time of operation; ECG—Encephalography; VGM—Ventriculography.
 Group I—Patients with normal intracranial pressure. Group II—Patients with increased intracranial pressure.

TABLE II.—HOMOLATERAL CRANIAL NERVE INVOLVEMENT.

	N. V			N. VI			N. VII			N. VIII			N. IX and X		
	Sensory									Coch. Vestib.					
	Humbness	Neuralgia	Face	Cornea	Diplopia	Objective	Parosmia	Imp. Taste	Tinnitus	Deafness	Obj. Deaf.	Vertigo	Nystagmus	No Resp.	Dim. Resp.
I	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
II															
III	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
IV	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
V	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
VI															
VII															
VIII															
IX															
X															
XI															
XII	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
XIII	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

(1) Bilateral hyperactive response.

(2) Bilateral atypical response.

Group I—Patients with normal intracranial pressure. Group II—Patients with increased intracranial pressure.

symptom history. Actually this is influenced greatly by variations in the speed of growth of the individual lesions (Table 1). One tumor (2), only 1 cm. in diameter, had caused tinnitus for eight years and deafness for five years with no increase in intracranial pressure, while another (10), measuring 1.5 x 2.5 cm. had caused vertigo for only seven months, but was accompanied by papilledema and hydrocephalus. In general, the larger tumors were found associated with increased pressure, but in one case (1), the tumor had reached the size of 4 x 6 cm. without causing increased pressure.

Duration of Symptoms: (Table I) The average duration of all symptoms in the group with normal pressure was three years and nine months, while that of those with increased pressure was slightly less than two years. This may indicate that the more rapidly growing lesions cause earlier incidence of increased intracranial pressure, or it may be that in the presence of increased pressure the patient's memory for the dates of development of symptoms is not so accurate. In view of the carefully detailed histories obtainable from many of the latter group, the first explanation seems more logical.

Initial Symptoms: It was found that vertigo was the most frequently noticed "first symptom," initiating the symptom complex in two of the five cases in Group I, and in four of the eight cases in Group II. Tinnitus was the initial symptom in one of each group.

Involvement of the Cranial Nerves

Acoustic Nerve: (a) Vestibular Division: Acoustic neurinomas are believed by many to originate within the vestibular nerve in the majority of cases. As noted above, vertigo was the most frequent symptom ushering in the syndrome. Objectively, ataxia of greater or lesser degree was found in all cases of both groups. Nystagmus was present in all but one case (10), a late one of rapid progression. The nystagmus was of a slow, coarse, horizontal type, increasing in amplitude on rotation of the eyes toward the side of the lesion.

Caloric Vestibular Tests: One of the most characteristic of all findings in cases of acoustic neurinoma is loss of the vestibular

responses on the side of the lesion when the ear is douched with hot or cold water. This test is particularly valuable since it usually differentiates tumors of the nerve itself from those of the cerebello-pontine angle or of the cerebellum. However, as has been noted by others, some vestibular fibers may persist unimpaired in the periphery of the lesion and transmit a reaction when stimulated. Of the five Group I cases, four gave no response to caloric stimulation on the side of the lesion, the reaction of the so-called "dead labyrinth." The other case (5) gave *hyperactive* responses on both sides. Of seven Group II cases tested, four gave no response on the side of the lesion; one (9) gave a sluggish response; one (11) gave a slightly atypical response, and one (13) had sluggish response on each side. While the absence of a caloric response in one ear is one of the most constant findings, failure to find a "dead labyrinth" does not always exclude the diagnosis of acoustic neurinoma.

(b) Cochlear Division: Tinnitus, an irritation phenomenon of the cochlear division, is to be expected early in the course of the disease, but only one of five cases in Group I and two of eight cases in Group II mentioned it as an initial symptom. Tinnitus usually yields to deafness in the ear and in most cases precedes the onset of deafness. In one Group I case (4), however, tinnitus did not appear until the ear had been known to be partially deaf for four years. Tinnitus was present in three of four Group I cases and in four of eight Group II cases. Often it is of short duration at the onset of the disease and may be forgotten by a careless patient if it be of mild degree. Unilateral partial or complete deafness was known to have been present in four of five Group I cases, and in five of seven Group II cases. In all cases of both Groups, some degree of unilateral deafness was found on testing.

Involvement of the Adjacent Cranial Nerves

(Table II.) All of the cranial nerves finally may be involved when the tumor has reached sufficient size to produce a marked hydrocephalus, but those of the posterior fossa are subject to early direct pressure or traction effects. The proximity of the facial and trigeminal nerves make these two particularly vulnerable. The trigeminal gives evidence of disturbance earlier than the facial, and one may

find the facial nerve so stretched over the surface of the tumor as to be almost unrecognizable on inspection, in patients who have exhibited no demonstrable signs of facial weakness.

Trigeminal Nerve: Three of the five Group I cases had noticed numbness of the same side of the face and one (1) had suffered such pain that two operations had been performed for supposed trigeminal neuralgia. Of the eight Group II cases, only two (12 and 13) complained of facial numbness. The most sensitive test for impairment of function of this nerve is that for corneal sensation. This was lost or greatly impaired in all five of the cases in Group I and in six of the eight cases in Group II; in two cases (7 and 10) no note had been made of the reaction.

Abducens Nerve: Involvement of this nerve is rarely by direct pressure of an acoustic tumor, but is produced either by the pressure of high intracranial tension or by strangulation of the nerve by an overlying blood vessel.⁴ Diplopia was noticed in one (4) Group I and one (13) Group II case, and objective ipsilateral abducens palsy in only two Group II cases.

Facial Nerve: Three of the five cases in Group I and three of the cases in Group II showed evidence of unilateral facial palsy. This was never severe in degree, was seen generally only on retraction of the lips and was not noticeable with the face in repose. The most typical finding was an "ironing-out" of the nasolabial fold when the patient smiled.

Glossopharyngeal, Vagus, Accessory and Hypoglossal Nerves: Examinations of the functions of this group of nerves were not recorded with sufficient uniformity to allow accurate separation of findings in this group of nerves and the vocal cords were not routinely examined. Dysarthria and dysphagia were present in two of the five Group I and in none of the cases in Group II.

Pain or Tenderness: Local pain and tenderness to pressure over the mastoid tip or the suboccipital region on the side of the lesion was present in three of the five Group I cases and in three of the Group II cases. In the records of the other five Group II cases no note had been made concerning this finding, but it is our impression that it occurs very frequently in these patients. In one case

(13) local pain was the initial symptom.

Lumbar Punctures: Lumbar punctures (Table 1) were done in four of the five Group I cases and in four of the eight cases of Group II. Gardner,³ using kymograph tracings of the spinal fluid pressure to record the effect of unilateral jugular compression, has reported three cases showing positive Tobey-Queckenstedt phenomena on the side of the lesion. It has been our practice to make no compression of the jugulars in the presence of a spinal fluid pressure of 250 mm. or more of water, so the test was not applied routinely to the Group II cases. In one case (12) with a pressure of 450 mm., it was found that only a slow fall of pressure followed removal of fluid, indicating patency of the fluid passages. The pressure was slowly lowered to 150, after which the Tobey-Queckenstedt test was made, and a venous block was indicated on the side of the tumor. Evidence of venous block was found in none of the four cases of Group I.

The only significant findings on analysis of the spinal fluid was the increase of globulin content (Pandy test) in two of the four Group I cases and in all four of the Group II cases in which the fluid was analyzed. These fluids contained increased quantities of total protein in all cases. This is in agreement with the recent findings of Hare.⁵

X-ray: Roentgenographic evidence of erosion of the petrous portion of the temporal bone or of widening of the porus acusticus was present in one of the four Group I cases and in one of the four cases of Group II.

Summary

An analysis was made of thirteen cases of acoustic neurinoma verified at operation between 1930 and 1935. Three other patients with bilateral tumors were not operated upon and were omitted from the analysis. Of the thirteen cases, five were found to have no increase in the intracranial pressure, and in eight cases the pressure was increased. It is believed that this proportion of cases without increased pressure consulting the neurological surgeon is greater now than in past years and is probably due to the wider recognition of the diagnostic syndrome by the profession. The separation of cases into

groups by anatomical phenomena does not correspond to the duration of the patients' symptoms; the average duration of symptoms of the group without increased pressure was three years and nine months, while that of those with increased pressure was slightly less than two years. Apparently the discrepancy is to be accounted for by differences in the speed of growth of the lesion, the more rapidly growing tumors causing increased intracranial pressure earlier than do the more slowly growing ones where the brain is able to become adjusted to the presence of the new growth.

Unilateral absence of vestibular response to caloric stimulation is perhaps the most useful criterion for the separation of patients with tumor prior to the advent of increased intracranial pressure

from the large number of patients exhibiting signs of vestibular and cochlear irritation and pareses. 333 LINWOOD AVE.

References

1. Cushing, H.: *Tumors of the Nervus Acusticus*, Phil., Saunders, 1917.
2. Cushing, H.: *Intracranial Tumors*, Baltimore, Thomas, 1932.
3. Gardner, W. Jas.: "The Tobey-Queckenstedt test in the localization of tumors of the cerebello-pontine angle.", *Arch. Neurol. & Psych.* 20: 585, 1928.
4. Cushing, H.: "Strangulation of the Nervi Abducentes by lateral branches of the basilar artery in cases of brain tumor.", *Brain* 33: 204, 1910.
5. Hare, C. C.: "The Cerebrospinal Fluid Obtained by Lumbar and by Ventricular Puncture in Tumors of the Brain.", *Bull. of The Neurol. Instit. of N. Y.* 4: 64, 1935.

NEW STATE TUBERCULOSIS PATHOLOGIST

Max Pinner, M.D., formerly of the Desert Sanatorium, Tucson, Arizona, has recently been appointed principal diagnostic pathologist for the state tuberculosis hospitals.

Doctor Pinner received his medical education at the Universities of Berlin and Tübingen, Germany, and has postgraduate training in the field of experimental, pathological, and clinical tuberculosis in Hamburg. Before going to Tucson, Doctor Pinner was engaged in research in tuberculosis at the Municipal Tuberculosis Sana-

torium in Chicago during which time he was an instructor at the University of Illinois Medical School. Later he was director of laboratories of the Maybury Sanatorium, Northville, Michigan, and pathologist at the Herman Kiefer Hospital in Detroit.

Doctor Pinner's scientific contributions have dealt principally with the bacteriological, serological, immunological, and pathological phases of tuberculosis work. His headquarters will be at the Biggs Memorial Hospital, Ithaca.

AIR-CONDITIONED AMBULANCES

Air-conditioned ambulances are shortly to bring greater safety and comfort to New York's ill and injured.

Following an earlier announcement that custom-made weather for motorists has reached the stage of engineering reality, the president of a large New York company operating private ambulances has made known that installation of the first of these motor-car air-conditioning units will be in one of the ten ultra-modern "hospital rooms on wheels" which his concern operates in Manhattan, Brooklyn, the Bronx and London, England.

"Invalid transportation offers the most advantageous of fields for application of automotive air-conditioning," he said. "Invaluable medical advantages and practical

comforts will accrue to the sick from controlled atmosphere in ambulances.

"They can be moved in a moderate temperature in summer and kept comfortable and uniformly warm in winter. They will breathe only the purest of purified air, filtered and humidified or dehumidified. By keeping the windows closed at all times, the air will be kept constantly and completely clean within, even when it is dirtiest without."

The Medical Record gives this formula for industrial remedy research: Find an attractive name; 2, discover a medicine to fit the name; 3, discover a disease the medicine will remedy; 4, advertise like hell; 5, count the profits. Success!

THE MODIFIED MIKULICZ OPERATION AS OPPOSED TO THE ONE-STAGE PROCEDURE FOR CARCINOMA OF THE COLON

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Carcinomatous tumors of the right half of the colon are usually large, bulky, ulcerating growths, which do not tend to encircle the bowel, and hence do not often produce obstructive signs.

The right half of the colon arises, in common with the small intestine, from the midgut. The function of the right half, like the small intestine, is primarily absorptive, and hence symptoms from tumors in this region are chiefly those of deranged physiologic function. That is, that carcinoma of the right half of the colon produces greater anemia and general debilitation than that of the left, which is thought to be due to the greater absorption of toxins through the richer vascular and lymphatic radicles of this region.

The malignant tumors of the left half of the colon are small, encircling fibro-carcinomata which reduce the lumina to a small calibre and hence produce mild obstructive phenomena in a majority of instances.

The left half of the colon originates from the hind-gut and its function is principally that of storage. Its wall becomes progressively thicker, its lumen smaller, its contents more solid, and its vascular and lymphatic supply less abundant than that of the right.

It is, therefore, clear that symptoms from these tumors in the left half of the colon result principally from obstruction.

Selection of Operation

The selection of an operative procedure for carcinoma of the colon depends primarily upon the location of the tumor, the degree of obstruction, the evidence of metastasis, the amount of infection and inflammatory reaction around the growth, and the obese or asthenic condition of the patient. Personal or economic considerations should play no part whatever in the selection of the operative procedure.

Even in the presence of metastatic lesions in the liver and retroperitoneal structures, it is often advisable to remove the primary tumor mass, for these patients handle the metastatic lesions better than they do the primary tumor. Their intestinal obstruction is relieved, and they are thus given a more comfortable existence than would be possible in the presence of the original tumor.

Carcinoma of the right half of the colon indicates a primary ileocolostomy between the terminal ileum and the transverse colon, preferably of the end to side, aseptic type. In patients with good general resistance the tumor may be resected and the operation completed in one stage, or, in less favorable cases, the extirpation of the growth may be deferred to a later date.

The modified Mikulicz operation is occasionally employed in resection of tumors of the right half of the colon. The principal disadvantage is that it allows the escape of the excoriating liquid contents of the ilium, which markedly irritates the surrounding skin.

Carcinoma of the lower sigmoid, recto-sigmoid, and rectum usually indicates an abdominoperineal resection in one or two stages.

Occlusive, malignant tumors of the left half of the colon are generally more safely treated by the so-called "obstructive resection" or modified Mikulicz procedure.

In referring to the Mikulicz operation, I refer to the modified form as it is generally used today, rather than as first practiced by Bloch in 1892, by Paul in 1895, and popularized by Mikulicz in 1903.

The original Mikulicz operation entailed simply the mobilization of the segment of gut containing the tumor and bringing it out through the incision, without any attempt to remove the adjacent gland bearing tissues of the mesentery.

From the Surgical Service, New York Post Graduate Hospital. Read at the Annual Meeting of the Medical Society of the State of New York, Albany, May 14, 1935

This procedure has been modified in recent years to include the removal of a triangle of mesentery containing the lymphatic structures immediately adjacent to the tumor, and into which metastasis would primarily take place.

The modified Mikulicz operation is most valuable and finds its principal indication in tumors of the splenic flexure and more particularly in the sigmoid loop.

The principal objection to the old Mikulicz operation is the high incidence of transplantation of carcinoma cells into the abdominal wound. This is easily understood when one considers that the corresponding lymphatic structures of the mesentery were not removed, but were simply fixed into the wound. This objection does not apply to the present modification of this procedure. With the resection of the tumor and its immediate metastatic zone of mesentery, the persistence or so-called recurrence of carcinoma in the wound or region of anastomosis should be no higher than that of resection of the same tumor with

primary anastomosis and closure of the abdominal wound. In other words, this operation as it is modified today permits as radical removal of a tumor as can be

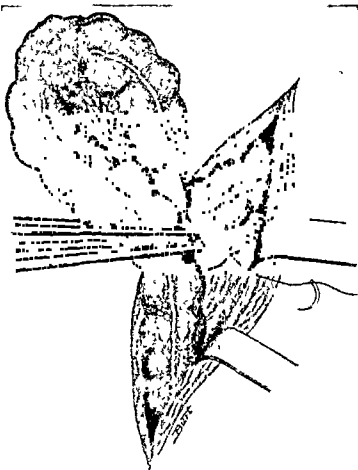


Fig. 2 The tumor has been isolated and the Rankin clamps applied. The peritoneal edges are being approximated.

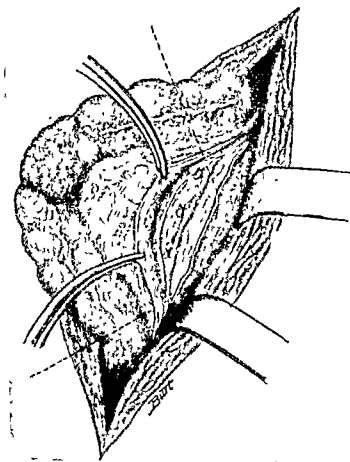


Fig. 1. The lateral peritoneal reflection has been incised and the sigmoidal vessels have been ligated at the root of the mesentery. The dotted lines indicate the extent of excision of the tumor, with its metastatic zone of mesentery.

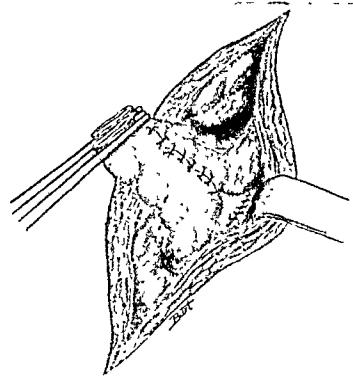


Fig. 3. The tumor with adjacent intestine has been cut away with the cautery. The retroperitoneal space has been closed, and the limbs of the colostomy apposed with interrupted sutures.

done by any other procedure, affords a lower mortality, and avoids the one dreaded feature of the old Mikulicz operation, viz., the high incidence of transplantation of tumor cells into the abdominal wound.

An acute obstruction due to a malignant tumor of the left half of the colon is a rather infrequent condition. When it is present no exploration or removal of the tumor should be attempted. The abnormal, distended gut does not lend itself favorably to anastomosis, with a secure suture line. Only the simplest of procedures in the form of a cecostomy or ileostomy should be adopted. When the fistula is functioning well, an exploratory laparotomy should be done, and the decision made at that time as to what type of operation is best suited for the case. In general, resection of the tumor and an end to end anastomosis is indicated, because there still exists a safety valve in the form of the preliminary cecostomy or ileostomy. This decompression measure has also permitted the inflammatory reaction around the tumor mass to subside, and hence resection is made easier.

In particularly favorable cases, where the condition of the patient is good, with little or no obstruction, dehydration or loss of weight, it seems wise to resect the tumor and do a primary anastomosis. A cecostomy or ileostomy should be established as a safety valve in those cases where there is any doubt about the firmness of the suture line.

If the patient is obese, or there is considerable inflammatory reaction about the tumor, which makes it difficult to adequately mobilize the segment of gut, a primary resection and anastomosis is also indicated.

On the other hand, the majority of patients with malignant tumors of the left half of the colon present signs of chronic obstruction, in which thorough cleansing of the colon is often difficult. Experience indicates that the so-called "obstructive resection" or modified Mikulicz operation is a safer procedure, and is attended by a lower mortality than the primary resection and anastomosis, even though somewhat greater hospitalization is required in this multiple stage procedure. However, in considering the factors that determine the selection of an

operation for a given case, the economic factor is a decidedly secondary one as compared to the life of the patient.

Operative Procedure

An incision is made over the tumor mass. The lateral peritoneal reflection is incised to permit adequate mobilization of the tumor-bearing segment toward the median line. Care must be exercised to prevent injury to the left ureter, which tends to be lifted up with the peritoneum. The vessels supplying the segment to be resected are then visualized and ligated near their origin at the root of the mesentery. The ligation of these vessels frees a triangle of mesentery to be resected with the tumor. (See Fig. 1.)

The three-blade Rankin clamp is applied so as to include a segment of intestine at least two or three inches on either side of the tumor, with the handle of the clamp extending across the abdomen to the right. A similar straight clamp is applied distal to the Rankin clamp, between which the tumor bearing segment of intestine will be cut away with the electric cautery. (See Fig. 2.)

The mesenteric edges of the two limbs are sutured together, the peritoneal edges over the lumbar gutter are approximated to eliminate raw surface, and the limbs of the colostomy are apposed, if possible, with interrupted sutures. (See Fig. 3.) It is preferable to bring the teniae coli in apposition, where practicable, in preparation for the application of a straight clamp to the spur. This eliminates the possibility of hemorrhage when the clamp is applied to the spur in the region of the longitudinal bands rather than through the mesenteric region, with subsequent release of a mesenteric vessel.

After this preparation of the limbs of the colostomy, the tumor and adjacent intestine and the metastatic area of the mesentery are cut away with the cautery. (See Fig. 3.)

The incision is closed snugly around the two limbs of the colostomy. No sutures are placed between the peritoneum and the intestine, for adherence between these surfaces is firm in 48 to 60 hours. (See Fig. 4A.)

The proximal blade of the clamp is released on the second or third day, or earlier if distention demands. The distal

blade necroses through and comes away spontaneously in about seven days. A double-barrel colostomy then results. (See Fig. 4B)

After this clamp comes away, the septum is cut down by applying a long blade, straight clamp to the septum. (See Fig 5A.) It is lightly locked when first applied, and gradually tightened every day or two, or constant pressure is applied by looping a strong rubber band around the handles of the clamp. Usually it is necessary to reapply the clamp in order to cut away sufficient of the septum to form an adequate new lumen.

After the septum has been removed, the patient is sent home for 3 to 6 weeks to

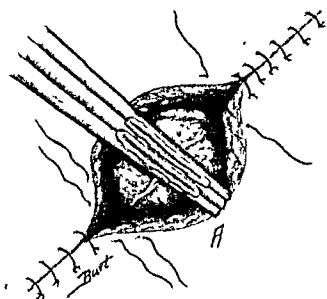


Fig 4 A Wound is being closed around the double-barrel colostomy, without sutures between the abdominal and intestinal walls B Double-barrel colostomy after removal of the Rankin clamp.

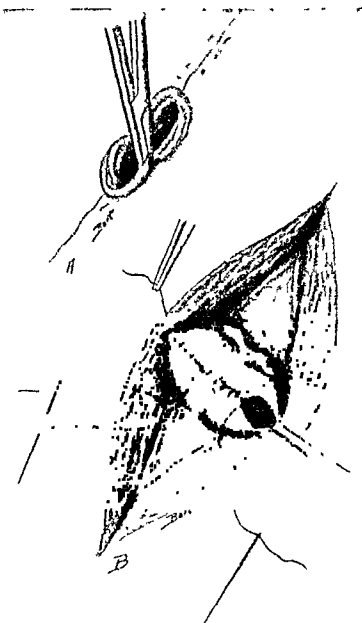
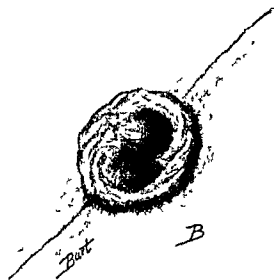


Fig 5 A Application of the straight clamp to cut away the septum between the afferent and efferent loops of the colostomy B Extraperitoneal closure of the colostomy

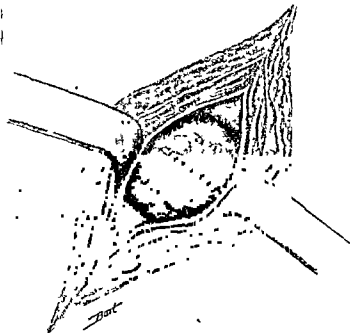


Fig 6 Colostomy has been closed extraperitoneally in a direction transverse to the longitudinal axis of the intestine

allow him to regain his strength, and to cause the granulations at the mucocutaneous margin around the colostomy to completely heal before the extraperitoneal closure of the colostomy is done.

Closure of the colostomy: After thorough cleansing of the proximal and distal portions of the colon, the operation is done preferably under spinal anesthesia. An incision is made around the colostomy about one-quarter inch lateral to the mucocutaneous margin. This skin margin is closed temporarily over iodoform gauze. The incision is then deepened and the layers of the abdominal wall are freed from the limbs of the colostomy down to the peritoneum. The wound is packed with iodoform gauze and entirely protected from the colostomy opening. The encircling rim of skin is excised.

The mucosal edge is then approximated and inverted with continuous catgut suture, in a direction transverse to the intestinal axis, so as to reduce the narrowing to a minimum. A second line of suture then inverts the mucosal suture. (See Fig. 5B.) The closed intestine is gently pressed into the abdomen, without disturbing the continuity of the peritoneum. (See Fig. 6.) The fascial and muscular layers of the abdominal wall are

closed en masse with interrupted mattress sutures.

The fat layer and skin should be left open, and this part of the wound packed lightly with iodoform gauze over silk or rubber tissue. The fat is more easily infected, and the closure of this layer with subsequent infection may mean failure of the hernial repair. The packing is removed on the fourth or fifth day, when the edges of the wound are pulled together with adhesive. This most often results in primary union.

Conclusions

(1) The modified Mikulicz operation includes the resection of the tumor and adjacent intestine, together with the corresponding metastatic area of the mesentery.

(2) It is a safer procedure, it is technically easier of execution, and, therefore, has a wider field of application than the primary resection and anastomosis.

(3) It eliminates, in so far as possible, the implantation of carcinoma cells into the abdominal wound.

(4) It permits as radical resection of a given tumor as can be accomplished by any other procedure.

121 EAST 60TH STREET

NEW DIRECTOR OF INDUSTRIAL HYGIENE

State Industrial Commissioner Elmer F. Andrews has announced the appointment of Dr. Leonard Greenburg of New York, former health officer of New Haven, Conn., as executive director of the Division of Industrial Hygiene, State Department of Labor. "Dr. Greenburg is internationally recognized as an authority on industrial hygiene," Commissioner Andrews said. He has contributed widely to scientific periodicals on occupational diseases, industrial sanitation and ventilation, dust content of air and its effects on the health of the

worker, lead in the atmosphere, lead and benzol poisoning and kindred subjects.

Dr. Greenburg has served as chairman of the Chemical Section, of the Industrial Health Section and of the Occupational Disease Committee of the National Safety Council; and many other similar positions. He was graduated at Yale University in 1923 with a Ph.D. in public health and at the Yale University Medical School with a degree of M.D. in 1930. He received his license to practice medicine in New York State in 1930.

AN ABUSE TO BE HALTED

It has been discovered that medical sphygmomanometers, manufactured for physicians' use only, are being used by persons outside the profession. Manufacturers are unable to trace the leak, and are asking the aid of the profession. The President of the Taylor Instrument Companies, of Rochester, says in a letter:

"We deplore deeply any such mis-use of instruments designed and produced solely for the medical profession. We are greatly

disturbed when the Certified Tyco becomes a plaything in the hands of people who employ it unethically and ignorantly for commercial gain in amusement parks. If any of our friends discover how these instruments are procured for any unethical purpose, we shall appreciate knowing about it. Such information will, of course, be considered confidential, but will aid us in taking any steps possible to prevent continuance of the practice."

THE PROGNOSIS OF CANCER OF THE CERVIX TREATED BY IRRADIATION

MITSON B. SACKETT, M.D., F.A.C.S., *New York City*

In evaluating a method of treatment for malignant disease, our first consideration should be salvage or prolongation of life, but conservation of health and happiness is nearly as important, perhaps more important from the standpoint of the survivors and their relatives. The following report will touch on the five-year and ten year salvage of life by radiation therapy for carcinoma of the cervix, and be devoted chiefly to a study of the health of the survivors as indicated by the complications observed and treated in the Cancer Clinic of the Woman's Hospital, directed by Dr. G. G. Ward.

Table I indicates that one in four unselected cases,¹ one in two cases with cancer clinically limited to the cervix, and seven out of ten very early cases will survive at least five years after primary radium treatment.

Table II shows that about one in six unselected cases, two out of five clinically localized cases, and two out of three very early cases will survive ten years or more. We have shown elsewhere² that about 70 per cent of the patients surviving five years have lived ten years or longer in spite of the lowered life expectancy in their respective age groups. But we know of several patients symptom free for ten or more years, in whom cancer of the uterus as the cause of death was proved or not definitely excluded.

Although our experience with adjuvant roentgen therapy cannot be evaluated until after 1937, the vast improvement in results thus obtained by Regaud³ leads us to hope that the accompanying tables do not express the optimum attainable.

Cancer propaganda has apparently not yet improved the material handled at the Woman's Hospital. In Table III it is noted that cancers clinically limited to the cervix comprise 21.6 per cent of all cases seen in the eight years 1919 to 1927 while they total only 18.4 per cent of all

cases seen in the seven years 1928 to 1934.

Careful pathological studies⁴ have failed to give a dependable prognostic significance to the histological type of the cancer, the size of its cell clusters,⁵ or the stromal and leukocytic reaction. Until an index of radio curability is forthcoming, we must treat all histologic types alike, and watch each patient every month in order that those which prove radio resistant (40 per cent according⁶ to Regaud) may be identified in time for appropriate radical or palliative surgical measures.

The incidence of cancer in the stump following supravaginal hysterectomy is shown in Table IV to be over seven per cent. Inasmuch as the dangers of treatment are the same, all stump cases are included regardless of the lapse of time between the hysterectomy and the first irradiation. This time interval was three years or less in twenty-four cases, four or more years in twenty-three cases.

The total salvage including adjuvant roentgen therapy will not greatly surpass thirty cases per hundred, or with universal early detection and treatment, double that number. Further reduction in the uterine cancer toll will depend on more widespread adoption of prophylactic measures. Conservative obstetric, immediate or intermediate repair or cervical lacera tions,⁷ appropriate correction of puer peral⁸ and infectious erosions and endocervicitis,⁹ total instead of supravaginal hysterectomy¹⁰ for benign conditions were technically feasible—these measures will forestall thousands of cervical cancers. This gain, however, must be balanced against the dangers inherent in each procedure, some of which—stenosis, cavitation, and malignant degeneration—have been recently emphasized by Curtis¹¹ and by Bullard.¹²

The health of patients surviving primary treatment for cancer of the cervix

is roughly indicated by the incidence of complications summarized in Table V. Since about three-quarter of all cases die within five years, it is fair to assume that the figures are weighted by the disease itself. This inference is borne out by Table VI giving the complications in patients surviving treatment over five years and over ten years. Hemorrhage, intestinal obstruction, and disorders of the rectum, bladder and urethra, upper urinary tract, and nervous system are strikingly less frequent in the survivors as compared to the entire series. On the other hand the slight increase in number of fistulae and gastric upsets, and the great increase in blood-lymphatic obstruction in the survivors point to the irradiation effect. Circulatory obstruction was noted in 9.5 per cent of the forty-two ten-year survivors, compared to 3.1 per cent of all cases seen. Only parallel tables based on untreated and surgically treated patients can differentiate the disease effect from the irradiation effect.

Complications, whether caused by irradiation, by the progress of the cancer itself or by both, can be discussed accord-

ing to the system affected. In the internal genitalia we observed both acute and chronic inflammation: pyometra in fifty-five cases, occasionally present before treatment; severe hemorrhage in eighty-nine cases; and one case of bilateral hydrosalpinx in association with frozen pelvis.

In the blood and lymphatic system we observed phlebitis in five cases, and obstructive lymphedema affecting the suprapubic, vulvar, inguinal regions, thighs and legs in twenty-three cases. The disorder was bilateral in half the cases; and in most instances the signs progressed hand in hand with the spread of carcinoma to a fatal termination. But in the four cases where the signs subsided under treatment it is reasonable to suppose that the obstruction was due to inflammatory and productive changes initiated by the irradiation.

Symptoms referable to the upper alimentary tract occurred in fourteen cases, eight of which had nausea and vomiting and another was treated for "gastric ulcer." Independent malignancy of the stomach or pylorus was the cause of

TABLE I

Five-Year End-Results in Carcinoma of Cervix at Woman's Hospital; Patients Seen from February 15, 1919 to April 15, 1930

Schmitz Class	All Classes	I	II	III	IV	V	I & II Early	III, IV & V Late
Total seen.....	493	10	89	345	47	2	99	394
Irradiated.....	474	10	89	345	28	2	99	375
Untreated.....	19	0	0	0	19	0	0	19
Living 5 years.....	127	7	47	73	0	0	54	73
Absolute survival per cent.....	25.8	70.0	52.8	21.1	0	0	54.5	18.5
Relative survival per cent.....	26.8	70.0	52.8	21.1	0	0	54.5	19.5

Untraced, counted dead from cancer 13 (2.7 per cent)

TABLE II

Ten-Year End-Results in Carcinoma of Cervix at Woman's Hospital; Patients Seen from February 15, 1919 to April 15, 1925

Schmitz Class	All Classes	I	II	III	IV	I & II Early	III & IV Late
Total seen.....	254	3	61	172	18	64	190
Irradiated.....	247	3	61	172	11	64	183
Untreated.....	7	0	0	0	7	0	7
Living 10 years.....	42	2	24	16	0	26	16
Absolute survival per cent.....	16.5	66.6	39.3	9.3	0	40.6	8.4
Relative survival per cent.....	17.0	66.6	39.3	9.3	0	40.6	8.7

Untraced, counted dead from cancer 12 (4.9 per cent)

death in three cases, respectively, eleven, ten, and seven and one half years post radiation in four others inoperable carcinosis of the uterus and ovaries, rectum, intestines, and peritoneum was demonstrated. Only 6 cases have survived long enough to indicate that the gastric symptoms were purely due to radium or x-ray.

Intestinal obstruction occurred in twenty five cases, and was the cause of death in nine, of which five were operated upon with three postoperative deaths from peritonitis, and four died without operation. Spreading carcinoma was proved in nine out of eleven cases coming to laparotomy or autopsy. Nevertheless seven cases were more or less relieved by operation, two are still alive at three years and two and one half years after operation, and we agree with T. E. Jones¹³ of Cleveland that exploratory laparotomy is justified for exact diagnosis, cure of benign strictures, and relief of starvation and cachexia in obstruction due to malignancy.

Of the forty-two rectal disorders noted in the entire 688 cases, proctitis or its symptom triad of tenesmus, bleeding, and diarrhea occurred in thirty-five patients, fifteen of whom died within four months after rectal symptoms were noted. In most of the others the rectal symptoms subsided and five of the group are among the five-year survivors. Carcinomatous invasion of the rectum was demonstrated in three cases, stenosis four times, benign ulceration several times, and angulation from extrinsic mass twice.

Sixty patients, or 8.7 per cent of the total seen, developed seventy-three fistulae divided as follows:

Rectovaginal 25, with 1 operative closure
Vestibulovaginal 22, with 1 operative closure
Rectovaginal and vesicovaginal 8, with 4 spontaneous closures of the rectovaginal fistula and one spontaneous closure of the vesicovaginal fistula
Rectovaginal and intestinovaginal 2
Rectovaginal, ureterovaginal and abdominal fecal 1
Rectocervical 1
Vesicovaginal and abdominal fecal 1

The incidence of fistula in untreated hopeless cases was 22.2 per cent, it occurred in six (12 per cent) of the fifty hysterectomy stump cases. Reradiation was implicated in one half of the fistula cases. The disease was spread beyond the cervix in eighty-five per cent of the cases subsequently developing fistula.

Twenty-six women developed symptoms referable to the nervous system; one suicide occurred in a patient with metastases in the lungs, another with signs of brain metastasis had a severe psychosis and the others suffered pain in the lower abdomen, groins, pelvis, sacroileum, and sciatic regions. The low incidence of these symptoms in the five- and ten-year survivors indicates their grave prognostic significance. Sympathectomy and cordotomy are in our opinion still *sub judice*.

In the lower urinary tract we observed a total of sixty-seven disorders in 688 cases, or 9.8 per cent. Excluding those in the first year after irradiation there remain thirty-seven cases of which eleven revealed extensive cancerous involvement of the pelvis, bladder, or urethra. The other twenty-six cases (3.8 per cent) comprise five strictures of the urethra,

TABLE III
Extent of Disease, by Schmitz Classification in Two Groups of Patients with Carcinoma of Cervix Uteri at Woman's Hospital

		I	II	III	IV	V	Total
8 Years 1919-1927	Number	4	73	249	31	0	357
	Per cent	1.1	20.5	69.7	8.7	0	100.0
		Early cases 21.6 Per Cent		Late cases 78.4 per cent			
7 Years 1928-1934	Number	12	43	216	23	4	298
	Per cent	4.0	14.4	72.5	7.7	1.3	100.0
		Early cases 18.4 per cent		Late cases 81.5 per cent			

six cases with ulcer or slough in the bladder, and fifteen cases diagnosed as cystitis or trigonitis by the cystoscope or because of the symptom triad of frequency, dysuria, and hematuria. Since ten of the twenty-six cases survived irradiation less than three years it is fair to conclude that the cancer itself was at least partly responsible in two-thirds (21 out of 37) of the patients suffering late bladder disorders. From the Memorial Hospital, Dean¹⁴ reported 2.1 per cent of late or "tertiary" bladder reactions (urethra not included) after irradiation for primary carcinoma of the cervix.

Upper urinary tract disease occurred in thirty-nine or 5.6 per cent of 688 cases, and with about the same frequency in those patients who survived five years and ten years. Pyelitis, renal abscesses, or pyelonephritis on one or both sides occurred in fourteen instances including four present on admission and one case too far advanced for treatment. Unilateral pyonephrosis occurred six times, four nephrectomies including one for tuberculosis being done; and bilateral pyonephrosis was demonstrated three times. Hydronephrosis was noted nine times, being present once on admission, twice with associated hydroureter, twice with active carcinoma demonstrated in the parametrium or iliac fossa. In five other cases of obstructed ureter parametrial cancer was demonstrated, while in two excised specimens carcinoma cells were seen in the wall of the ureter itself. Ureterovaginal fistula occurred once, chronic nephritis four times, and uremia

seven times. Bugbee¹⁵ has reported six of the above cases of ureteral occlusion in greater detail.

We believe urinary tract obstruction may frequently be demonstrated by routine cystoscopic studies long before symptoms supervene, that it is the cause of much of the suffering of irradiated cancer patients, and that it can often be relieved. Prompt detection of the side first involved offers the best hope of a successful sidetracking operation while renal function on the other side is still adequate.

Summary and Conclusions

(1) Treatment of carcinoma of the cervix by radium and roentgen rays prolongs life from five years in one-fourth to one-third of all cases, and for ten years in one-sixth to one-fifth of all cases.

(2) This salvage could be doubled if the cancer was detected and treated when still limited to the cervix; but cancer propaganda has apparently thus far failed to increase the proportion of early cases.

(3) Further reduction of the cancer toll, therefore, depends on more widespread use of prophylactic measures, with due regard to the dangers inherent in these procedures.

(4) A study of the complications observed in 688 cases, and in five- and ten-year survivors indicates (a) that except for hemorrhage each complication occurs in less than ten per cent of patients; (b) that most complications are *less* frequent in patients destined to survive than in the entire series, and that many complications in the survivors are transient or

TABLE IV

*Incidence and Curability by Irradiation of Carcinoma of Cervix Following Supravaginal Hysterectomy**

Schmitz Class	I	II	III	IV	V	All Classes	Early	Late
Total seen.....	4	9	31	5	1	50	26%	74%
All treated.....	(8%)	(18%)	(62%)	(10%)	(2%)	(100%)		

Incidence: 50 in 688 Cases seen, or 7.3 per cent

Incidence: 50 in 664 cases treated, or 7.5 per cent

Series	Total Seen	Irradiated	Living 5 Years	Living 10 Years	Survival Rate Abs. and Rel.
1919, to May 15, 1930.....	31	31	15	..	48.4% At 5 Yrs.
1919, to May 15, 1925.....	16	16	7	4	25.0% At 10 Yrs.

* Without regard to time elapsing between hysterectomy and first irradiation. This interval varied from two weeks to 18 years; it was 3 years or less in 24 cases, 4 years or more in 23 cases.

easily cured, (c) that complications are more frequent in untreated hopeless cases than in the entire series, (d) that complications often appear within a few weeks or months of death from the cervical cancer or metastases

(5) The above findings indicate that most complications are caused by the disease itself, and that their appearance is of unfavorable prognostic import. On the other hand the increase in blood-lymphatic obstruction in the five- and ten-year survivors points more to the irradiation effect

(6) Carcinoma of the stump following supravaginal hysterectomy occurred in over seven per cent of our cases, and the incidence of fistula in these patients was twelve per cent, or one and one half times the general fistula incidence

(7) Early detection and proper treatment of complications, especially obstructive lesions of the urinary and gastrointestinal systems will not only reduce suffering but prevent needless deaths and increase the five- and ten-year salvage by irradiation therapy for carcinoma of the cervix uteri

120 EAST 75TH STREET

TABLE V

*Complications in Carcinoma of Cervix Uteri Treated by Irradiation. Cases Seen at Woman's Hospital February 1919-April 15, 1935**

Complication	260 Cases Seen Before 5-15-25	238 Cases Seen 5-15-25 to 5-15-30	190 Cases Seen 5-15-30 to 5-1-35	All 688 Cases 1919 to 1935
Pyometra	15	28	12	55 (7.9%)
Pentometis and Sepsis	2	4	4	10 (1.5%)
	2	11	12	25 (3.6%)
	16	27	17	60 (8.7%)
	20	34	19	73 (10.6%)
	24	31	34	89 (12.9%)
	4	14	24	42 (6.1%)
	12	23	32	67 (9.8%)
	11	12	16	39 (5.6%)
Upper G. I. tract disturbance	4	5	5	14 (2.0%)
Blood lymphatic obst	8	11	10	29 (4.2%)
Nervous symptoms, pain, etc	5	5	16	26 (3.7%)

* Complications not noted uniformly in earlier cases, in hopeless cases, and cases lost in follow up. Many duplications as one complication precedes or is an early stage of another

TABLE VI

Complications in Carcinoma of Cervix Uteri Treated by Irradiation, Cases Surviving as of April 15, 1935

Complication	Survivors over 10 Years 42 Cases to 5-15-25	All 688 Cases 1919 to 1935	Total 5 Year Survivors 127 Cases 1919 to 5-15-30
Pyometra	4 (9.5%) +	7.9%	9 (7.1%) -
Pentometis and Sepsis	0 -	1.5%	2 (1.6%) +
	0 -	3.6%	2 (1.6%) -
	3 (7.1%) -	8.7%	11 (8.7%) =
Disturbance, bladder	5 (11.9%) +	10.6%	17 (13.4%) +
	3 (7.1%) -	12.9%	5 (3.9%) -
	0 -	6.1%	5 (3.9%) -
	2 (4.8%) -	9.8%	11 (8.7%) -
Upper urinary tract dis	2 (4.8%) -	5.6%	7 (5.5%) -
Upper G. I. tract disturbance	1 (2.4%) +	2.0%	4 (3.2%) +
Blood lymphatic obst	4 (9.5%) +++	4.2%	7 (5.5%) ++
Nervous symptoms, pain etc	0 -	3.7%	1 (0.8%) -

+ Sign means that complication is MORE frequent in survivors than in whole group

- Sign means that complication is LESS frequent in survivors than in whole group

References

1. Heyman, J.: The So-called Stockholm Method and the Results of Treatment of Uterine Cancer at the Radiumhemmet (see Table 6), *Acta Radiologica*, 16:129, 1935.
2. Ward, G. G., and Sackett, N. B.: Radium Therapy of Carcinoma of the Cervix Uteri (see Table 3), *Surg., Gynec. & Obst.*, 60:694, 1935.
3. Regaud, Cl.: Comparaison des valeurs curatives de l'hystérectomie et des méthodes radiothérapiques, dans le traitement des épithéliomas cervico-utérins du premier degré, *Bull. de l'Acad. Méd.*, 107:611, 1932.
4. Plaut, A.: The Relation of Prognosis to the Histological Findings in Carcinoma of the Cervix, *Surg., Gynec., & Obst.*, 43:450, 1926; also *Arch. Path.*, 3:240, 1927.
5. von Mikulicz-Radecki, F.: Die Radikaloperation im Rahmen der elektiven Therapie beim Collumcarzinom, *Arch. f. Gynäk.*, 156:244, 1933.
6. Regaud, Cl.: Considérations sur la radiothérapie des cancers cervico-utérins, d'après l'expérience et les résultats acquis à l'Institut du Radium de Paris, *Arch. de l'Inst. du Radium*, 3:155, 1934.
7. Emmet, T. A.: Lacerations of the Cervix Uteri as a Frequent and Unrecognized Cause of Disease, *Am. J. Obst.*, 7:442, 1874.
8. Barrett, R. L.: Electrocoagulation of Cervical Erosions and Endocervicitis in the Late Puerperium, *J.A.M.A.*, 103:1516, 1934.
9. Pemberton, F. A., and Smith, G. V.: The Early Diagnosis and Prevention of Carcinoma of the Cervix, *Am. J. Obst. & Gynec.*, 17:165, 1929.
10. Farrar, L. K. P.: Total Abdominal Hysterectomy; Anatomy and Technique, *Surg., Gynec., & Obst.*, 60:826, 1935.
11. Curtis, A. H.: Obstructive Lesions of the Uterus and Their Complications, *Surg., Gynec., & Obst.*, 60:930, 1935.
12. Bullard, E. A.: Analytical Study of the Results of Operations on the Cervix Uteri with Special Reference to Strictures, *Am. J. Obst. & Gynec.*, 27:668, 1934.
13. Jones, T. E.: Results of Prolonged Irradiation for Malignant Conditions of Pelvis, *J.A.M.A.*, 103:1678, 1934.
14. Dean, A. L., Jr.: Injury of the Urinary Bladder Following Irradiation of the Uterus, *Am. J. Obst. & Gynec.*, 25:667, 1933.
15. Bugbee, H. G.: Ureteral Occlusion Following Radium Implantation into the Cervix, *J. Urol.*, 32:439, 1934.

MENTAL TESTS OF AUTOMOBILE DRIVERS

In view of the tragic rise in automobile fatalities, medical and psychiatric tests of applicants for driving licenses and mandatory physical and psychiatric tests of licensed drivers at periodic intervals were advocated by Dr. David Kaliski, chairman of the coordination committee, Medical Societies of the Metropolitan Counties, at the Eastern Conference of Motor Vehicle

Administrators in New York.

He advocated the testing of drivers every five years up to the age of 55 or 60 and every year thereafter.

Dr. Irving Straus, connected with the New York State Bureau of Motor Vehicles, while questioning the practicability of universal physical and mental tests of drivers, endorsed Dr. Kaliski's position.

THE UNIVERSAL REMEDY

Had you been a European in the latter part of the sixteenth century your physician or herbalist would have prescribed a strange medicine for your minor illnesses as well as for your serious diseases. Corns or tetanus, cough or consumption, halitosis or cancer—it mattered not what the malady was—the remedy was the same.

This panacea, this perfect cure-all, was tobacco, which, from about 1560 to the middle of the nineteenth century, had an important place in the materia medica. A list of 100 maladies for which tobacco was used has been compiled from the books of the

period. These volumes are part of the library of George Arents, Jr. A fuller account of the ailments cured by tobacco, the *modus operandi* of nicotian therapeutics, etc., will be incorporated in the descriptive catalogue of the Arents library, which is about to be published in four folio volumes by the Rosenbach Company of Philadelphia and New York.

All the old writers were enthusiastic, of course, over tobacco's remedial virtues, insisting that the "divine herb" never failed in operation.

CIGARETTE SMOKE AS A HEALTH HAZARD

HERMAN SHARLIT, M.D., *New York City*

It has been said frequently, and with some justification, that the medical profession broke faith with the public in failing to inveigh vigorously against smoking as a menace to health. But it can never be held against our profession that it permitted itself, even by implication, to be involved in the endorsement of a tobacco product.

The cigarette industry is not a commodity business; by this I mean that the individual manufacturer makes no honest, wholehearted effort to claim a commodity better than his competitors. Each makes a cigarette that he feels will satisfy the public taste; he proceeds to exploit it by a type of advertising that concerns itself not at all with the inherent qualities of the commodity. In its truest sense the manufacturer's real commodity must never be discussed; it is taboo. A little reflection reveals the real commodity to be smoke—the dry, destructive distillation of wood (leaves); and what this smoke contains must be sung *sotto voce*. And so, carbon monoxide, ammonia, prussic acid, acetic acid, aldehydes including acrolein, the alkaloid nicotine and pyrrol, pyridine and other heterocyclic nitrogenous bases (generally grouped under the term "tars"), all products of the distillation and contained in the smoke, had best be forgotten for the greater happiness, perhaps, of the consuming public.

The manufacturer who sets out to make a more healthful cigarette must be prepared, however, to face these facts and to square his claims with them, at least when making these claims directly to our profession. The smoker knows, from practical experience, that old cigarettes produce a less agreeable smoke than fresh ones. The difference between the stale and fresh cigarette is simply one of water content of the tobacco. The cigarette stales by giving up original water content. To help maintain this original water content against the inevitable drying out, the manufacturer incorporates a hygroscopic agent in the tobacco mixture. The

agent generally used is glycerine. Since the late Thomas Edison lent his name to the assertion that the most harmful product of cigarette combustion was acrolein, glycerine as one probable source of this compound became widely objectionable. But decades of smoking glycerinated tobacco has proven the human organism fairly tolerant to the mixture containing it. Recently a manufacturer has substituted diethylene glycol for glycerine as a hygroscopic agent. The maker of a tobacco mixture containing a new combustible is at once on the defensive, at least from the point of view of public health, in that he has yet to know—if ever—that the new mixture is no more harmful than the old and tried mixture. And it is to the credit of that manufacturer that he set about to establish^{1,2} the harmlessness of this innovation. With the aid of the scientific ingenuity of a medical school laboratory, the demonstration was offered that not only did the new hygroscopic agent in the tobacco mixture produce a smoke less irritating than a similar mixture containing glycerine, but even less irritating than one containing no hygroscopic agent at all. This was all "proven" by judging the degree of edema of the conjunctivae of rabbits resulting from instilling into the eyes of these rabbits a water extract of the smoke from these different tobacco mixtures.

Without going into the character of the laboratory procedures for securing comparable smoke mixtures, these tests in the last analysis, were based on the judgment of an observer as to the amount of conjunctival edema induced in each experiment. All this, when there is at hand to every smoker, without benefit of medical school or laboratory, a test, fairer and more delicate; fairer, because it does not limit the test to the water soluble ingredients of the smoke, and more delicate, because the olfactory nerve ends in the mucous membrane of the nose are far more efficient than the eye for detecting irritating smoke. Indeed, that is precisely part of the job of these nerve

ends. When cigarettes made with diethylene glycol were so tested by the writer and several others (smoke quickly drawn up through the posterior pharynx and exhaled through the nose), they were found, unfortunately, to be quite as irritating as other cigarettes. Strangely enough, this simple test is as scientific* as that published in behalf of the diethylene glycol cigarettes. We do not wish to stress the reliability of these judgments, but simply to call attention to the fact that where elaborate laboratory procedures merely eventuate in a judgment based on an elemental sensation, these findings may be adequately checked in simple ways.

It may fairly be asked if, in the nature of things and viewed from the vantage ground of strict business, cigarette manufacturers can offer anything better or more certain to effect improvement in quality than changes of the nature we have been discussing. The answer is decidedly in the affirmative.

The writer has been interested in tobacco smoke chemistry for about ten years, during which time consultations with many executives in the industry have afforded occasional opportunities to penetrate the veil of secrecy generally assumed before outsiders, particularly physicians. The following is presented as a physician's analysis of the cigarette industry, viewed as a public health problem.

The tobacco industry, like all others, concerns itself with making money. It is an industry centuries old, steeped in an art that defies the amateurish dabbings of intruders and hypnotized into a belief in the sacredness of the leaves that are cured and blended. This latter spirit it has successfully striven to instill in the consuming public, with the result that there has been achieved for the industry a false public psychology, from which the industry, unmolested, or if you will, unassisted, will never dare retreat. The belief that cigarettes contain only pure, unadulterated tobacco is almost universal among smokers, and while vaguely aware

of flavorings in tobacco mixtures, they are blissfully ignorant of the ungodly messes of which they are composed. Having once taken the position that smoke quality is merely a matter of the quality and purity of tobacco, there is no place for publicity on the adulterants used in making the cigarette as good and as acceptable as it is.

What cannot be achieved by the art is attempted by suggestion through the printed word. Tobacco smoke is a mucous membrane irritant, if nothing else; and even the most confirmed smoker realizes that on occasion. And so each cigarette maker, after the manner of his copy writer, cries "It's mild." In seeking mildness the industry is endeavoring to meet a universal demand; irritating smoke drives the smoker to try another brand, with little or no relief, however, and so the industry is prepared to make any change in manufacturing that will give the requisite mildness, provided: (1) It does not at the same time produce a flatness of taste and odor which robs smoking of its "kick;" (2) it does not rob the smoke of such tasteless ingredients as some tobaccoists hold responsible for maintaining and cultivating the smoking habit (nicotine?); † (3) and provided the added treatment is of such a nature as to permit of publicity in keeping with the consumer's psychology of "the purer the tobacco, the better the cigarette!" Above all else, it must supply this advertising copy which is the life blood of the business.

Without entering into the bases for his belief the writer is satisfied that a tobacco smoke less harmful physiologically yet acceptable to the average smoker's taste will not result from a change in the combustion mixture, either through a change in the curing or blending of the tobacco leaf or the introduction of some new combustible into the tobacco mixture. This is exactly the approach to the general problem of tobacco production through the decades that has brought the cigarette to its present state of excellence, or the lack of it. There remains a simpler yet perfect approach to a solution—filtration of the smoke.

* Says the *Popular Science Monthly* of March 1935, concerning the professional taster of soap mixtures: "Despite its apparent crudity, this test is said to show the amount of free alkalinity in the soap with high precision, revealing in a moment what would otherwise require three to four hours of laboratory work."

† This, however, is a mistaken notion; there is never a physiologic craving for tobacco.

Removal of combustion products from the smoke stream may be effected by purely physical methods, or by the operation of physicochemical principles (absorbents). The former is merely a matter of supplying condensation surface to the smoke before it reaches the mouth. This may be accomplished by the use of cigarette holders or hollow tipped cigarettes containing small cotton plugs, but their use practically limits the removal of deleterious substances to the smoke tars. However, the consumer has evinced little interest in the use of any contrivance that produces a more physiologically tolerable smoke if by so doing it adds an atmosphere of artificiality to a habit which has become second nature. This has confirmed the tobaccoist in his conviction that a smoker does not smoke for his health, and that unnecessary fuss detracts from his enjoyment of a "good smoke."

Patent grants relative to the tobacco industry liberally cover the matter of adding absorbent materials to tobacco mixtures. In the main these materials are clays or claylike substances. It would lead us too far astray to enter into the reasons why most of these offered additions to the art cannot practically serve the purposes for which they are offered. But they all represent a proper approach from the medical standpoint in the effort toward producing a less harmful smoke.

It is apparent that filtered smoke can only be insidiously thrust upon the public. This requires the filter to be dispersed through the tobacco by way of one of these physicochemical absorbents. The writer has spent much time in the study of tobacco smoke absorbents and feels certain that there is at least one substance available for addition to tobacco that meets all the requirements. It is non-combustible and therefore takes no part

in the formation of the combustion products. It effects recognizable changes in the smoke when added to tobacco, to an extent of less than 1 part in 500, in even this small concentration it reduces the tar and acid content of the smoke, effecting mildness without flatness. Since the amount of filtration is a function of the concentration of the filtering material in the tobacco mixture, such a treatment of tobacco permits of effects upon smoke ranging from imperceptible influences on its original chemistry to one so thorough as to leave the smoke completely tasteless.

The medical profession, if it is to concern itself in the matter at all, should take the following position regarding cigarettes. Tobacco smoke cannot be considered harmless. The manufacturers of tobacco products are to be encouraged in their efforts to modify the art in behalf of a more harmless smoke, but, however good the achievement, the introduction of a filtering material into the smoke stream will effect a still safer smoke. The profession should assist in the production of a consumers' psychology sympathetic to the introduction of filters into cigarettes.

The physicians of the United States never have endorsed a tobacco product and probably never will, but they should be prepared to endorse and encourage the use of principles in the practice of the art where it is evident that such practices lead to the production of a less harmful smoke.

32 EAST 64TH ST

References

- 1 *Proc Soc Exp Biol and Med* 32 241, 1934
- 2 *Laryngoscope*, 45 149 1935

QUICK WORK

Remarkably quick action followed the editorial in the November 1 issue of the *STATE JOURNAL* on the proposed "survey" of deaf pre-school children in Monroe County. The project was to spend \$10,440 of public funds by the WPA on this survey, when there were only 14 such chil-

dren in the county. The State and County Medical Societies, the County Health Officers' Association, the District Health Officer and the other groups raised objections, and finally the *STATE JOURNAL* criticism appeared on October 31. The order was cancelled the next day.

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EDITORIALS

Real Health Work

The unnecessary and inexcusable delay in starting PWA slum clearance projects is typical of the inconsistent attitude of bureaucracies toward health. Light airy homes would accomplish more for the poor in the way of mental as well as physical health than the most comprehensive program of sickness insurance. Yet many of the social reformers active in the Administration ignore the concrete benefits to be derived from proper housing and clamor instead for compulsory health insurance.

In New York City alone it has been estimated that 450,000 families are living in dark, airless tenements that are breeding spots for disease and corruption. Similar conditions exist, on a smaller scale, in every city in the state. Remedial projects have been hanging fire for several years—but the emphasis at Washington is still on social insurance rather than housing!

The situation has another aspect that is not wholly devoid of significance. Thousands could be put to work on housing projects but for the most part they would be poor laborers unsuitable to the formation of a strong political machine. The vast permanent bureaucracies of social insurance, on the other hand, are highly susceptible to political domination

and contain many lucrative sinecures for the supporters of those in power.

In commenting on the "inexcusable confusion and delay" in getting more PWA housing projects going, the *New York World Telegram* made the following pertinent criticism. "Organization and direction have gone badly askew amidst executive changes, bickerings and petty attitude of politicians notoriously oblivious of the fourth of the nation's population living and bringing up children in hovels." It would be regrettable in the extreme if the adoption of compulsory health insurance were to put medical care in the hands of those same politicians.

Penalize Violations

Under the amended Compensation Act, workers requiring further care after hospitalization should be referred to private practitioners on the approved panel. In spite of this provision, some hospitals continue to handle industrial cases after they become ambulatory. The violation is a profitable one to them for the fees collected from this work help materially to supply their treasuries. Their gain is medicine's loss.

The income from professional service to compensation patients legitimately belongs to the doctor and not to the hospital. The worker should go back to his

own physician wherever possible and as soon as possible. There is no reason to prolong emergency relations with the hospital once the emergency has passed and the patient is able to return to his home.

Since the profession has no effective means of compelling institutional regard for the intent of the new laws, it is up to the state to see that violations cease. If persuasion has no effects, penalties will become necessary for the success of workmen's compensation in this state depends on strict compliance with spirit and letter of the statutes enacted last winter.

It has been suggested that hospitals which persist in the treatment of ambulatory industrial cases be deprived of their tax exemptions. This is a fair proposal for the paid treatment of compensation cases is not part of the purpose or rights of tax exempt hospitals. Institutions which enter into competition with private practice and divert legitimate income therefrom should be required to contribute to tax funds in the same measure as the private practitioner must.

Group Malpractice Insurance

Pursuant to resolutions adopted at the October meeting of the Executive Committee there appears elsewhere in our columns a chronological sketch of events which led to the change in carrier from that of the Aetna to the new policy carrier, The Yorkshire Indemnity Company.

In our last issue we called attention to the financial responsibility of the new company and endeavored to clear any misunderstandings regarding this.

Today we urge all carefully to read the prepared statement which is official and authoritative. In addition, we wish to call attention to the fact that while the Aetna scrupulously carried out every obligation it undertook, the company is not to be credited with more than that to which it is entitled.

The fine record made under the group plan is not entirely due to the Aetna. Every phase of the controlling operations and the defense mechanisms has been

handled by our Society and not by the Aetna. The Society functioned through its representatives, its insurance committee, its officers, and its defense counsel.

From the Society's standpoint all that is needed from any carrier of the group plan is that the company handle the money, comply with the laws of the State of New York, and be financially responsible.

The members of the Society need no middle man. There is no need of insurance agents to act for our members. Our insurance committee acts for them, and as in the past, in the last analysis, it and the executive committee have the final determination in all moot questions.

With the retention of our able counsel, Mr. Lorenz J. Brosnan, and our insurance representative, Mr. Harry F. Wamvig, and with exactly the same insurance committee set up that functioned so well in the past, and with the financial status of the Yorkshire Indemnity Company fully established as qualified, there should be no concern felt by our members that the future will not be as successful as the past has been.

Finally, there may result from the newer arrangement financial returns of benefit to the Society and its insured members.

The Next State Meeting

Plans which are in the making for the ensuing meeting of the State Society which will be held in New York City, April 27-28-29, are rapidly maturing, and everything points to the promise of an exceedingly interesting meeting from the medical and scientific standpoints.

The Waldorf-Astoria Hotel which will house all the activities has made rates so that its facilities will be within the reach of everybody.

The scientific sessions, the scientific exhibit, and the public meetings are being developed in such a way as to present a rounded scientific résumé, inter-related with clinical material available on the topics in the university clinics and teach-

ing hospitals, and the exhibit will show details. The local committee in New York is arranging for a clinical day along such lines.

It is not too early for members desiring to participate in the scientific program to make their contact with their section chairman, and with the chairman of the scientific exhibits as space is limited, on both programs and in the hall where the exhibit will appear. We shall from time to time make note of the details of the program as its progress toward completion becomes available.

Estrogens and Mammary Carcinoma

It has been known for a long time that the function and structure of the mammae are regulated by hormones formed in other organs of the body. The role played by the ovary in increasing the size of the breasts at puberty and that of the placenta in enlarging the mammae during pregnancy were called to the attention of the profession by Halban thirty years ago.¹ Lathrop and Loeb,² Murray³ and others were among the earlier investigators who confirmed Halban's observations by experimentally producing mammary changes with the utilization of ovarian and placental extracts. The advance of biological chemistry, however, has resulted in the isolation and identification of the active principles responsible for the phenomena which had been observed. Collectively these are termed estrogens, the most important of which is estrin.

It seems that the normal function of estrin is the preparation of the breasts so that their anatomical structure will be suited for the physiological process of lactation which, in turn, is brought about

by the action of other hormones. This ability to produce a structural change in the mammae during pregnancy led Burrows⁴ to investigate the effect of prolonged administration of estrin on the mammae of non-pregnant female mice and of male mice. In all the experimental animals who were treated with estrin for a period of at least fifty days, a distinct proliferation of the ducts was seen. The mammary ducts in addition showed a dilatation which was definitely cystic in character. With continued injections of estrin, a definite hyperplasia of the epithelial lining was noted.

The observations of Burrows are worthy of studied consideration because of the generally accepted view that chronic cystic mastopathy is a precursor of mammary carcinoma. Differences of opinion do exist as to the role played by cystic mastopathy in the production of cancer of the breast but these can be attributed to the fact that they who agree as to its etiological importance base their view upon histological studies⁵ whereas those who discount its significance are guided more by clinical observation.⁶ The collective experience of workers in this field, however, emphasizes the close relationship between cystic mastopathy and cancer of the breast. Therefore, since the estrogenic substances are capable of producing cystic mastopathy and, furthermore, can bring about a hyperplasia of the epithelium lining the ducts, there would seem to be at least an indirect relationship between the activity and quantity of estrogens in the body and the appearance of mammary carcinoma.

This experimental work is provocative in that the knowledge gleaned from it may be utilized eventually for the pre-

¹ Halban, J.: Die innere Sekretion von Ovarium und Placenta und ihre Bedeutung für die Funktion der Milchdrüse. *Arch. f. Gynäkol.*, Vol. 75, P. 353, 1905.

² Lathrop, A. E. C., and Loeb, L.: On the Part Played by Internal Secretion in the Spontaneous Development of Tumors. *J. of Cancer Res.*, Vol. 1, P. 1, 1916.

³ Murray, W. S.: Ovarian Secretion and Tumor Incidence. *J. of Cancer Res.*, Vol. 12, P. 18, 1928.

⁴ Burrows, H.: Pathological Changes Induced in the Mammary by Oestrogenic Compounds. *Brit. J. of Surg.*, Vol. 23, P. 191, July, 1935.

⁵ Cappel, D. F.: Observations on Cancer of the Breast in the Light of Experimental Cancer Research. *Glasgow Med. J.*, Vol. 115, P. 181, 1931.

⁶ Campbell, O. J.: The Relationship between Cystic Disease of the Breast and Carcinoma. *Arch. of Surg.*, Vol. 28, P. 1001, 1934.

vention of malignancy in this location. At the present time, the amount of estrogenic substances present in the blood and urine at different times can be estimated with a fair degree of accuracy. The reports of Burrows and others should stimulate the development of tests for the estimation of susceptibility to estrin so that the possibility for an individual woman to develop cystic mastopathy can be determined before it occurs. Should such tests be found, it then would be but a short step toward the isolation of antagonists for the treatment of an excess of estrogens in the body. Such a one is already known to exist in the form of progesterin, which is derived from the corpus luteum.

Prolongation of Life in Diabetes and Pernicious Anaemia

Since the advent of insulin in the treatment of diabetes and the use of liver to combat pernicious anaemia, there has been a great deal of discussion as to whether these remedies are accomplishing what has been expected of them. It is frequently forgotten that the sufferers from these ailments will be afflicted throughout life because their bodies have lost the power to manufacture a certain substance in sufficient quantity to cure the disease. A person has diabetes because the islands of Langerhans have ceased to function and he always will be a diabetic regardless of whether or not he exhibits any active manifestations of the disease. Hence, in estimating the value of the newer therapy for diabetes and pernicious anaemia, one must consider that it is employed not as a curative measure but for the purpose of keeping in abeyance the symptoms and destructive evidences of these maladies.

An analysis of the London Registrar-General's statistics of death by Scott¹ would tend to show that since the gen-

eralized use of the new methods for the treatment of pernicious anaemia and diabetes, there is apparent an average lengthening of the span of life for all persons with these diseases, amounting to three and one half years. Upon further analysis, diabetics under 55 years of age show a lengthening of life which amounts to about eight years. To further prove the efficacy of insulin therapy, an increase in the number of diabetics who die after their fifty fifth year has been noted since 1922 and is due, in all probability, to the postponement of death by the application of insulin therapy in the younger ages.

These statistics are all the more impressive when it is realized that they embrace all deaths from diabetes and pernicious anaemia without regard as to whether or not the newer means of therapy were employed. Nor has consideration been given to the adequacy of the treatment or to the continuance of the therapy by the patient. Despite these absent factors, insulin and liver therapy are shown, by Scott's study, to have been of inestimable benefit in the prolongation of the life of diabetics and those stricken with pernicious anaemia. Further gains are to be expected when the patients themselves will adhere more rigidly to the guidance of their physicians.

CURRENT COMMENT

THE NEW YORK MEDICAL WEEK, November 2, 1935 says, "Few citizens realize that internes in municipal hospitals receive no payment whatsoever throughout their period of service. These physicians who have completed an arduous and costly training and upon whom virtually all the routine medical duties of the hospital devolve must continue to depend on their families for clothing and pocket money while they are serving the city in an essential capacity."

ACCORDING TO EDWARD F. KLFIN, *JAMA*, November 2 1935 "In England the average number of panel patients (in 1935) for the average physician was nine hundred and sixty. A maximum number of 25,000 insured persons is fixed and no physician single handed may ordinarily have

¹ Scott, P. The Lengthening of Life by Modern Therapy in Pernicious Anaemia and Diabetes. *Brit Med J* Vol 1 P 1013 May 18 1935

more." * * * After a careful analysis of the whole English system, a study of its earnings and deductions, citations of penalties, Klein concludes with, "We, in the United States simply plead for the continuation of sane, simple medical economics." * * * Obviously if any conclusion can be drawn * * * it is that panel medicine is medicine in a hurry, it is medicine by fear and threats, by bookkeeping, by penalties, by regulations and by starvation wages.

BERNARD SHAW SAID, "A hungry doctor is perhaps more dangerous than a wild beast."—*J.A.M.A.*, Volume 105, No. 18, page 1437.

"ALL STATES upon which a premium is set tends to become more common," says C. W. Armstrong, in "The Survival of the Unfittest." Edward F. Klein, *J.A.M.A.*, cited above, continues, "If sickness and unemployment receive as premium a free gift of other people's money, these states will therefore tend to spread. * * * As soon as material reward is to be gained with less effort in neglecting health, work and thrift, such negligence tends to increase. * * * The evidence is conclusive that, despite the payment of extraordinary sums, compulsory health insurance is an absolute failure to reduce the amount of sickness of workers."

THE THIRD FUNCTION OF THE GOVERNMENT.—Such efforts as slum clearance and public construction of houses must be kept clearly set off from private construction as an area of social experiment. They include only a tiny fraction of the general home building that should be undertaken. A volume of building sufficient to bring down cost, to provide widespread re-employment and to raise the standard of living of millions of people can only be provided by private enterprise, says Raymond Moley, in "*Today*," November 2, 1935.

IF ORGANIZED MEDICINE, with all the authority of its humanitarian and vested interest in the prevention of automobile casualties, does not insist upon and demand yearly physical examination by qualified physicians for drivers of motor vehicles, and present a comprehensive plan for them to be carried out, then organized medicine must also share the guilt for joint negligence which makes many of the horrible motor accidents possible. Thus says Dr. L. D. Redway, Chairman, Public Relations Committee of the Westchester County Medical Society.

"GETTING GLASSES FOR THE CHILDREN has become a racket and various agencies have been helping make this service easy to obtain. * * * We have proved to the needy that the American people are generous, charitable and willing to give a hand. Let us now prove to those who can help themselves, that Santa Claus has been held up and black-jacked to death." From an editorial in the *Mamaroneck Daily Times*, September 20, 1935.

RAYMOND MORLY, in the October 19th issue of *To-Day*, speaking of the Relief Snarl, says "As the end of another year approaches, the vexatious public relief problem still hangs on like a veritable old man of the sea. Hardly a single member or friend of the administration regards the present situation as anything but a political liability."

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

A Correction

TAYLOR INSTRUMENT COMPANIES
ROCHESTER, NEW YORK

October 25, 1935

New York State Journal of Medicine,
33 West 42nd Street,
New York City, N. Y.

Gentlemen:

We are very much concerned over the article in your issue of October 1, 1935 (Page 976)—"New Appliance to Combat Gangrene"—especially, in the limiting of Dr. Hermann's experience to only fourteen patients.

And, also, particularly as to the statement that the Strong Memorial Hospital in Rochester—at the time of the publishing of your article—had the only PAVAEX in use east of Cincinnati. While the facts are,—there has been one in the Rochester General Hospital since June and "east of Cincinnati" approximately One Hundred Units in use.

In your next issue, will you not correct the statements made in your October 1st issue, as it is not fair to the Rochester General Hospital, or to the many other hospitals in the east which have now had the PAVAEX in use for some months.

Yours Sincerely,
HERBERT J. WINN, President

Society Activities

Committee on Malpractice Defense and Indemnity Insurance

THE GROUP MALPRACTICE INSURANCE PLAN

On January 1st the State Society's malpractice insurance arrangement with the Aetna Life Insurance Company of Hartford will be replaced with a new one in the Yorkshire Indemnity Company of New York. That announcement has created a lively interest in the Group Plan and the benefits which will flow from the new arrangements and, therefore, the Executive Committee of the State Society has instructed the Insurance Committee to prepare a chronological story of the Group Plan from its beginning down to date.

Twenty-five or thirty years ago the problems of malpractice insurance and defense were relatively unimportant factors in the practice of medicine in the state. The number of suits filed against members of the Society was small even compared with the smaller membership list of those days. The cost of operating the Society's legal defense service was moderate and the facilities of the office of the legal counsel were adequate to handle, with a satisfactory degree of success, all of the suits and claims filed. In addition, there were several good insurance companies willing to sell malpractice insurance policies at rates between \$12 and \$15.

A change began to take place, however, at about the time the war broke out in Europe. Each year showed an increase in the number of suits and claims filed against members throughout the state and similar increases were reported from other parts of the country. The awards made by juries also rose sharply and the seriousness of the situation soon forced itself upon the attention of the entire profession. In this state, the astonishing increase in the number of suits filed and the cost of disposing of them was regarded simply as an abnormal run of chance that would flatten out when the unsettled conditions, following the war, returned to normal. But as time went on, the situation grew worse, instead of better, until it became apparent that what had once been considered as normal had to be discarded as out of date. The medical professions finally concluded that it faced malpractice hazards that increased at about the same rapid rate as the traffic hazards on crowded streets.

The officers of the Society watched these

changes closely, fully appreciating the nature of the danger that lay ahead. They foresaw that unless some strong and positive action were taken, to unite all available defense elements into a solid front, medical men would shortly become ready targets for every damage-chasing lawyer that could get to their patients. In the absence of dependable insurance of some kind, members would have nothing to stand between them and certain worry, with possible financial loss, except the malpractice defense service of the Society. Even that service might have to be modified unless the Society were able to shoulder the steady increasing expense that was required to operate it.

In the fall of 1920, a general survey of the whole situation was undertaken and Mr. Harry F. Wanvig, at that time the vice-president of a New York brokerage house, was asked to look into and report on what could be learned from the insurance companies. He talked with the officials of all the companies writing malpractice insurance in the State and, without exception, found them discouraged with the outlook and loath to experiment further with that type of insurance.

Nevertheless, the Society had concluded that malpractice indemnity and defense could be provided at reasonable costs in this State only by combining the machinery and funds of an insurance company with the cooperation and defense service of the State Society. It was apparent that if a plan of that kind could be made feasible, it was necessary that it be based upon a cost-plus idea, together with a comprehensive scheme for malpractice defense by the Society. After a number of conferences, a plan for such an arrangement was drafted, having as its object three fundamental requirements. They were:

First, to relieve the Society of some part of its malpractice defense cost so that it might continue that service for uninsured members without increasing its defense appropriation.

Second, to prevent, if possible, a heavy increase in the cost of malpractice insurance rates for individual members.

Third, to preserve for all members those excellent and highly necessary principles of defense that the Society through its legal counsel had so painstakingly established.

The cost-plus idea was conceived and the

detailed organization carried out by Mr. Wanvig. It is obvious that the organization and operation of a cooperative enterprise, such as the Group Plan, requires management by some one thoroughly familiar with the insurance problem and one whose viewpoint and experience are quite different from that acquired by insurance agents and insurance brokers. In working out the details of group insurance since its inception, it was necessary for your Society to have an insurance specialist who was familiar with every detail of malpractice insurance. He had to enjoy the confidence of the company on the one hand and the Society on the other and know exactly what the insurance company was entitled to, but in a larger measure what the members of the Society were entitled to, and how to keep the details of organization and operation constantly in order for the benefit of the Society.

The cost-plus idea is an example of the former and the present low expense ratio of the Group Plan is an adequate demonstration of the latter.

On behalf of the Society, Mr. Wanvig offered the plan to all the leading companies but each of them declined to consider it. Finally, after several months of persistent effort, the Aetna Life Insurance Company was persuaded to accept the Society's theory and to undertake the Plan.

Late in April, 1921, an arrangement embodying the three stipulated requirements, was concluded with the Aetna and ratified a few days later by the House of Delegates that met in Brooklyn that year. On May 1, 1921, the plan which came to be known as the Group Malpractice Insurance Plan of the Medical Society of the State of New York was put into operation, and Mr. Wanvig was appointed Insurance Representative of the Society to manage it.

In addition to covering many routine matters that had to be provided for, the arrangement with the Company was based upon three provisions that contained the heart of the undertaking.

1. *That all suits and claims against insured members would be handled exclusively by the legal counsel of the Society.*

This was a bold experiment, because so far as we know, it was the first time in the history of insurance that a company had been induced to turn over the defense of claims, for which it was liable, to the legal counsel of the policyholder. It was a very important provision so far as the members were concerned, as that was the only way in which highly specialized and competent legal defense could be guaranteed to them.

2. *That the Company would issue policies*

only to members in good standing of the State Society.

This was likewise an important provision because it eliminated the possibility of suits and claims against nonaffiliated doctors, having an unfavorable influence on the loss experience charged to the Society.

3. *That the Company would conduct the business for the Society on what amounted to a cost-plus basis.*

In the original negotiations with the various insurance companies, Mr. Wanvig had insisted on a base rate in the neighborhood of \$15, and in the agreement with the Aetna a tentative rate of \$18 was named. To protect the members in case that rate proved too high, and to protect the Company, and thus insure a continuing source of insurance for the members in case the rate was too low, it was agreed that the original rate of \$18 would remain fixed for a period of three years while the undertaking was being tested. At the end of that time it was to be increased or decreased so as to cover the actual cost of the business plus the stipulated handling charge or profit.

The arrangement further provided in detail the manner in which the cost would be computed, and fixed the amount which would be charged to the Society's experience for Expenses. Under such an arrangement there could be no question of unfairness to either the policyholder or the Company, and no opportunity for one to profit at the expense of another.

At the end of the first three-year period, Mr. Wanvig and Mr. Whiteside, who at that time was legal counsel for the Society, went to the home office of the Aetna in Hartford where the tabulated experience of the Group Plan was presented for their examination.

They found that although the Company's attitude had been sympathetic and their cost data carefully and scientifically tabulated, the cost of insurance per doctor per year for the minimum policy had been \$30.06, as against the rate of \$18 which members had been required to pay.

In accordance with the letter of the Society's arrangement with the Company, recognition of that cost was necessary in considering the rate adjustment due at that time. In analyzing the cost sheets, however, special attention had been drawn to the fact that the losses caused by x-ray therapists had been far in excess of those of the other branches of the profession. This was consistent with the Company's experience in other parts of the country and bore out the contention of the Fidelity and Casualty Company three years before, that the cost of x-ray therapy insurance in New York

was in the neighborhood of \$100. The Aetna would have been glad to discontinue insuring that specialty, but a compromise was reached whereby x-ray therapy was reclassified with a surcharge of \$75 and the base rate for the rest of the profession was raised to \$24.

Before the Group Plan was organized, the Fidelity and Casualty Company of New York wrote most of the malpractice insurance in the country. It had a longer experience with a greater volume of this business than any other company. The vice president in charge of its malpractice insurance business was a doctor and a member of the State Society, and its legal department attained considerable ability in handling malpractice claims. Regardless of this favorable position, the company found in 1921 that it required a rate of \$45 for its minimum policy excluding x-ray therapy. Even that rate did not prove to be high enough and a year or two later it discontinued its malpractice insurance department. Had the company remained in business, it would have been necessary to increase even that rate, as each year since that time has brought a steady increase in the number of suits filed and in the cost of disposing of them.

During these troubled years, the cost for similar insurance under the Group Plan has averaged only \$26.66, although over 3000 suits and claims have been closed with all liabilities fully discharged.

While this is a record in which insured members can find ample cause for confidence and a feeling of security, they should remember that this achievement would not have been possible except for the cooperation and supervision of the Plan by the State Society through its legal and insurance departments. Without that direction by the Society, no scheme for writing malpractice insurance in this State can succeed at rates less than nearly double those required by the Group Plan.

While everyone who has watched the defense of a malpractice suit in his community is familiar with the splendid work of the Society's legal department, only the members of the Insurance Committee come in contact with the work of the insurance department where the business is managed. In that department individual records are kept, tabulations checked, reserves tested, rates computed, plans made, controversies settled and needed changes initiated and worked out. And it is through this agency that the organized group power of the Society as a whole is brought to bear upon the malpractice insurance situation in the State. The work of this department would

never appeal to the interest of a busy doctor, but its labor protects his malpractice insurance welfare quite as much as does any other effort put forth on his behalf.

So far this discussion has dealt with the causes which brought the Group Plan into existence and the part which the Society played in its conception and organization. In addition, it has endeavored to present some idea of the extent to which the Plan is, in fact, a Society-controlled activity and the effect which that control has had upon the cost of malpractice insurance in this State. Some knowledge of these fundamental facts is necessary for a better understanding of the situation which has been created by the Society's decision to transfer the Group Plan from the Aetna to the Yorkshire Indemnity Company on January 1st.

A wide interest has been expressed in the Society's reason for terminating its agreement with the Aetna. The Company has proved itself to be a reliable institution. It has lived up to its arrangement with the Society and the Society has lived up to its arrangement with the Company. It has fully discharged all of its contract and moral obligations to the policy holders and for all of this the Company is entitled to the commendation it has received from the Society. However, to members who may be inclined to lay too much stress on the satisfactory manner in which their claims were handled, it is only fair to point out that those claims were defended and handled by the Society's legal counsel with all the power and prestige of the State Society behind him. Also, it should be remembered that any carrier of the Group Plan must meet its obligations fully and fairly because the money involved is furnished by the members, and, under the arrangement, the Society is in a position to see that liabilities are discharged in that manner. The carrier of the Group Plan has as little to do with its success than a bank has with the success of the corner grocery simply because the bank finances the grocery store. The success of the undertaking is due entirely to the group power of the State Society, skillfully applied by competent men in its legal and insurance departments. This fact cannot be converted and the sooner it is made clear to the members of the Society the better it will be for all concerned.

As pointed out above, the defense of claims is only a part of the Group Plan. The other part, composed of the business and rate making details, is equally important to the success of the Plan, and it was the Company's attitude towards some of those details which led to the Society's decision to make a change.

During the years since the Group Plan was organized many changes have taken place in the manner in which members carry on their practice requiring, in the opinion of the Society, changes in the forms and methods of handling the Group Plan so as to make the insurance protection more closely fit their needs. These changes include such items as the method of providing protection on account of the use of permanent assistants, making a new provision to cover the employment of temporary or emergency substitutes, revising the policy to agree with the rules of the Society, etc. Partly because the Aetna's forms were in general use throughout the country and for other reasons which it considered sufficient, the Company has been loath to make any extensive changes to meet the requirements in New York. Taken by themselves, none of these items was important enough to warrant seeking a new carrier for the Group Plan. However, they were given due weight when the matter of cost accounting and rate making brought the whole agreement into question.

In a cost-plus contract, it is essential to determine and agree beforehand the exact manner in which the cost shall be computed, covering among other things the amount which shall be added for operating expenses. Similar provisions were made in the original arrangement with the Aetna in 1921. At that time, it was agreed that the Group Plan would be charged with an expense loading substantially less than the published expense ratio of the Company. This favorable differential was possible for a number of reasons, all of which tended to reduce the cost of operating the Group Plan. From time to time other economies made it possible to further reduce this charge until, at the present time, the Plan is being operated with a lower overhead than that charged to any other stock insurance operations in the State.

In the meantime, the Company's general expense ratio had also been reduced so that at the end of 1934 the differential in favor of the Society was somewhat less than it was in 1921, although the Plan was being operated more economically than at any time in the past.

Disregarding this fact, the Company, this year asked the Society to approve an increase in this item to the 1928-30 level where the difference in favor of the Group Plan would have been negligible. Had the Society approved this proposal, an increase of about 3.5% would have been added to the expense loading in the premiums of every insured member of the Society.

In addition, a change in the general policy of the Aetna, with respect to its reserves for

outstanding losses, resulted in a substantial increase in the reserves charged to the loss experience of the Group Plan. This was not aimed specifically at our Group Plan; in fact, it is doubtful if the officials who directed the new policy even knew of the existence of this tiny bit of their enormous business. Nevertheless, it seriously effected the cost of the Group Plan to our members and was entirely unnecessary. Every year the cost of suits and claims against our members ran well below the reserves established for them, until the accumulated saving on this account had reached an impressive total. This indicated beyond argument, that no increase in our loss reserves was needed and, therefore, could not be approved by the Society.

Had both of these requests been approved, the base premium for a minimum policy would have risen to \$37, an increase of twenty per cent in the cost of malpractice protection in this State. And, what is even more important, all future rates would have been computed on that basis.

The Society, through Mr Wanvig, protested these proposed changes and a substantial reduction was made in the outstanding loss reserves, bringing the computed cost of Group insurance down to \$34. But, this still required an increase of over thirteen per cent in the current rates.

Your Society has never hesitated to grant increases in rates where it could be shown that they had been made necessary by increases in the amounts paid in settlement of claims or needed expenses. Had the proposed increases been predicated upon a proven necessity of that character, it seems likely that they would have been approved and recommended to the Executive Committee. However, since the proposed increase was based entirely upon a change in the method of cost accounting by the Company and not upon our own accrued loss experience, the Executive Committee were unable to convince themselves that the increase was either necessary or justified.

This bookkeeping increase which your Society was asked to approve, in addition to the fact that the Aetna was unable or unwilling to grant improvements in forms and methods of handling which the Society considered desirable, led inevitably to the conclusion that a change had taken place in the attitude of the Company. Possibly circumstances had led them into a new conservatism from which they were no longer able to take a helpful view of the situation in New York. At any rate, it was clear that a reaction had taken place and that the progressive and economical cooperation which the Society regards as vitally necessary to the existence of the Group Plan and

the service it performs could no longer be obtained under the old arrangement with the Aetna. When that conclusion was definitely, though reluctantly reached, there was no alternative to its termination.

The Yorkshire Indemnity Company was organized in 1926 under the laws of New York by the Yorkshire Insurance Company, Ltd., of England, which owns all of the capital stock. Its financial statement furnishes an interesting study to those who have watched developments in the insurance world during the past few years. Organized and owned by one of England's oldest and finest companies, it was endowed with a heritage of sturdy conservatism that stood it in good stead during the years of the depression when its safe investment program and sensible limitation of production kept it out of financial difficulties and retained for it the high rating of A+ given it by the Alfred M. Best Company of New York. No better indication could be found of the good judgment of the parent company than in the limited manner in which they started their Indemnity Company. This is emphasized by recalling that this took place at a time when other companies were giving more thought to the number of digits of capital they could use for advertising than to the problems of establishing sound and lasting institutions.

In the October 15th issue of this JOURNAL, a statement by the Insurance Committee was published regarding the Yorkshire Indemnity Company. That statement should serve to reassure everyone as to its stability so far as it concerns the Group Plan, but a further examination of its position is enlightening.

Solvency in an insurance company is not hard to define or understand. Its assets must be adequate, sound and liquid. It must establish and maintain ample reserves for various contingencies, the most important of which are its loss and unearned premium or re-insurance reserves. The latter is a fund from which unearned premiums can be returned to the policy holders or used to purchase re-insurance from another company to cover the liability which it has under its outstanding policies in case it encounters financial difficulties or decides to retire from business. Back of these reserves, as an additional protection to the policy holders, stands the company's capital and surplus. Assuming, as is usually done, that a company's loss reserve is always adequate, the test of a company is not the size of its surplus to policy holders but the ratio which that surplus bears to its unearned premium liability.

Turning to the Spectator Handy Chart for 1935, showing the financial position of all companies at the first of this year, an

interesting comparison can be made of the relative positions of the Yorkshire with the Aetna Life Insurance Company and the Aetna Casualty and Surety Company, to which the Group Plan would have been transferred this year or next. Listing these three companies in the order in which their surplus to policy holders exceeds their re-insurance (unearned premium) liability, they appear as follows: Aetna Life Insurance Company, 399%, Yorkshire Indemnity Company, 337% (since increased to 355%) and Aetna Casualty and Surety Company, 226%. This comparison is not intended to reflect in anywise upon the financial position or stability of the Aetna Casualty and Surety Company. It is made merely to indicate the relative position of the Yorkshire Indemnity Company.

In taking over the Group Plan, the Yorkshire Indemnity Company assumes all of the terms of the arrangement under which it has been operated in the past. The expense ratio will remain at its present level for the time being and every effort will be made to reduce it. Loss reserves will be established on a per-case basis as before, but the total will be adjusted so as to give recognition to the average cost of suits and claims closed. In addition, several important and valuable improvements have been incorporated in the arrangement which for one reason or another were not possible in the Aetna.

Arrangements have been made so that members may secure protection on account of the use of regularly employed assistants or technicians by an endorsement added to their individual certificates. Provision has also been made to cover the employment of temporary or emergency substitutes in the same manner at a cost of one-half that charged heretofore for permanent assistants.

The Company has agreed to furnish the Society with a loss voucher form covering each suit or claim closed with a complete analysis of all expenditures in connection therewith. At the conclusion of each case, this form will be prepared in triplicate and sent to the legal counsel of the Society to be checked and approved. One copy will be retained by him, one sent to the insurance representative of the Society, and one returned to the Company. No charges will be made against the Group Plan except from approved vouchers. This system will not only furnish a check upon the losses charged to the Society's experience, but will furnish data from which it will be possible to make any sort of loss analysis which might be required in the future.

Beginning January 1st, the cost-plus provision in our insurance arrangement will be extended to include premiums collected from and losses charged to the higher brackets of

insurance, instead of being limited to the minimum or base policy as heretofore, and a full accounting of all transactions will be made.

In order to take care of the business during the period while the transfer to the Yorkshire is being made, the Aetna has agreed to issue both new and renewal policies up to December 31st and to carry such policies to expiration during the year 1936. Policies expiring on or after January 1st, will be renewed in the Yorkshire as they expire. This will in no wise jeopardize or affect actions pending under Aetna policies or protection against suits which may arise at any time in the future for acts committed by an insured member while his Aetna insurance was in force.

A further matter in which interest is being expressed at the moment, is the question of the elimination of company agents and independent brokers through whom some of the members have secured their insurance under the master policy. After January 1st, certificates of insurance in the Group Plan can be obtained only through the insurance representatives of the State Society. This was the original intention when the Plan was organized and is an arrangement which the Insurance Committee has long felt was necessary for the protection of all concerned.

Our insurance representative is charged with responsibility to the Society for the proper handling of all details of operation and for seeing that all terms of the arrangement by and with the insurance company are fully carried out. Under the present method of handling, it is as impossible for him to assume responsibility for transactions handled by the Company through local agents or brokers, as it would be for our legal counsel to be responsible for the defense of a suit delegated by the Company to a local attorney. Furthermore, local agents or brokers are not interested in the troubles of the State Society and usually know very little about malpractice insurance or the requirements of the Group Plan. No company agent or independent insurance broker has been responsible for or contributed to the success of the Group Plan. Their activities have been limited to securing applications from members in many cases without sufficient knowledge of the business to advise them correctly when the applications were made, and none of them have been able to render assistance after a loss occurred. For this "service" agents and brokers have been paid commissions varying from 10% to 17½% of the premium, and that expense has been charged to the Group Plan operations.

Our insurance representative will travel throughout the State and, on request of com-

ponent county societies, will give all members, requiring it, expert advice on all matters pertaining to their malpractice insurance problems. With the elimination of agents and brokers, a further reduction has been made in the acquisition cost charged to the Group Plan, and when the new operations have been worked out and stabilized, further reductions will be possible. It is upon economies of this kind, as well as reductions in loss costs, that the Society hopes to lower the final cost of insurance, and all members are urged to support these efforts.

The benefits which will accrue to members from the new arrangement with the Yorkshire may be recapitulated as follows:

1. Our rate will remain the same as at present, and provided there is no marked increase in the number and cost of suits and claims disposed of, we can look forward to a reduction rather than an increase of cost.
2. There will be no increase in the expense ratio and further economies have been made, which it is hoped will reduce rather than increase that item.
3. The manner of establishing loss reserves for rate making will recognize the average cost of suits and claims closed.
4. The cost and profit agreement, under which the Plan is operated and upon which rates are computed, will extend to all limits of insurance instead of being confined to the minimum limits or base policy as heretofore.
5. The surcharge for x-ray therapy protection will be reduced 18 per cent.
6. The Society will be furnished complete data as to income and disbursements in such detail that total tabulations may be checked and losses analyzed as a whole or by any classification desired.
7. The old cumbersome method of covering the employment of assistants or technicians has been replaced by a simple endorsement to be added to the members individual certificate.
8. A much needed provision for covering members on account of the acts of temporary or emergency substitutes has been made at one half the cost of similar protection on account of regularly employed assistants. The importance of this provision should not be overlooked as this coverage is needed by a large majority of the members and they have been totally without it in the past.
9. All details of operation will be centralized in the insurance department of the Society. Such centralization is necessary in any group undertaking if group unity is to be maintained and group influence exerted.
10. Last but not least, we have associated with us and standing behind the Group Plan a high grade, sound, smaller company, composed of men of fine character and ability to whom the competent and economical operation of the Group Plan will always be a matter of first importance.

While the termination of a contract of

fourteen years' outstanding with an honorable partner, such as the Aetna has been, is a serious matter and a step that could not be taken lightly, no one can properly appraise the situation as outlined in these notes or recognize the advantages that will accrue to the Group Plan without a feeling of satisfaction and confidence in the transfer which the Society has decided to make.

At this point, it might be well to warn members who want their insurance renewed on time, not to delay completing and returning to Mr. Wanvig the new blue Yorkshire application blanks as soon as they are received from him. These are being sent out 90 days ahead of time, as it requires several months to complete the renewals. When members receive these new forms there will appear to be plenty of time before their current insurance expires, but in order to continue their protection without a break, the applications should be completed and returned at once.

In the matter of loss costs this opportunity is taken to repeat and emphasize what our legal counsel has so often said *that somewhere in the neighborhood of 60 per cent of claims against members are inspired by thoughtless, hasty and sometimes deliberate criticism of doctors by fellow practitioners.* Every malpractice action is inspired by, based upon or aided by the opinion or testimony of a doctor, and, in the majority of

cases by members of the State Society. That a member's honest professional opinion and testimony must always be available to his patients goes without saying, but the number of unjust and groundless suits which have been brought against members leads to the conclusion that the medical advice upon which they were based did not correctly represent the full circumstances regarding the case or the doctor had a poor conception of the duty he owed to the profession. Such suits are always won for the defendant, of course, but the cost of winning them is charged to the Group Plan and paid for by the members in their insurance premiums.

For fourteen years the Group Plan has held together the malpractice insurance situation in New York and prevented the high costs and chaotic conditions that most certainly would have existed without it. It stands as a monument to the wisdom and foresight of the State Society, and no one can examine its history or the extent to which it is controlled for the benefit of the members by the Society through the Executive and Insurance Committees and insurance representative without a feeling of comfort and security in the protection which it offers for the future.

CILAS GORDON HEYD
CARL BOFTTIGER
FREDERIC E. ELIOTT

Medical News

Albany County

A REGULAR October meeting of the Medical Society of Albany County was held on Wednesday evening, October 23, 1935. Doctor Arthur J. Wallinford read an interesting paper on auto blood transfusion. The discussion of this paper was opened by Doctor Lyle A. Sutton.

The second paper was "The Differential Diagnosis of Hyperthyroidism" by Doctor John C. McClintock. The discussion of this paper was opened by Doctor George E. Beilby.

The following new members were elected to the Society: H. Charles Goldberg, M.D., Syracuse University, 1922; Hugh Francis Leahy, M.D., Albany Medical College, 1932; W. L. J. McDonald, M.D., Queen's University, 1933; Peter D. Comanduras, M.D., Tufts College Medical School, 1933.

Chemung County

A SPECIAL MEETING of the Chemung County Medical Society was held on September 11th in the library of the Arnot-

Ogden Memorial Hospital. After other business was completed, the President introduced Dr. G. C. Vogt, of Binghamton, President of the Broome County Medical Society and also a member of the State Economics Committee. Dr. Vogt stated that the New York State Medical Society was to make arrangements whereby physicians who had qualified under the new Compensation Act would be eligible for the treatment of Welfare cases, Transient cases, WPA and other Federal Medical Cases, in their respective communities, and that one of the principles in this arrangement would be free choice on the part of welfare clients. He stated that the fee schedule would probably be ready about November 1st. He strongly advised a local County Welfare Advisory Committee. He pointed out that in Binghamton, physicians on service in the hospitals were paid \$15 for a minor operation and \$25 for a major operation, \$25 for a delivery, \$10 for an anesthetic, and \$1 per call per patient on all County Welfare Cases, and he felt that we are

entitled to the same fees. Dr. H. I. Johnson, Chairman of the Compensation Commission of Broome County, next made a few remarks about the Compensation Act and its workings and replied to various questions. At the request of the President the Secretary then read the salient features of the "Gradient Plan", and illustrated with lantern slides the details of this plan. The plan was further discussed by Dr. Vogt and various members.

Columbia County

DR. R. P. HARRIS, of the Columbia Country Club, brought the first Hudson River Gold Association championship to Hudson since the days of Harold Wood, when he won the annual senior championship held on the Powelton course at Newburgh on September 19th.

Playing in rare form against golfers from nine other clubs in the Hudson Valley district, Dr. Harris toured the difficult 18-hole layout at the Hilly City in 78 on his first day out. His second round started out well, with a first nine of 39, but the first three holes on the homeward nine tripped him and he scored 42 for a total of 81. With his 78 of the previous day, Dr. Harris' total of 159 is the lowest score in years in this tourney.

Greene County

AT THE 129th annual meeting of the Greene County Medical Society on Oct. 8 at the New Walters' Hotel at Cairo, Dr. Frederick W. Goodrich, of Catskill, was unanimously elected president. Other officers elected were as follows: Vice President—Dr. Earl T. McQuade of Coxsackie, Secretary—Dr. William M. Rapp of Catskill, Treasurer—Dr. Mahlon H. Atkinson of Catskill, Chairman of Legislative Committee—Dr. P. G. Waller of New Baltimore. Chairman of P. H. and P. R. Committee—Dr. Alton B. Daley of Athens. Delegate to State Society—Dr. M. K. Colle of Catskill. Alternate—Dr. W. H. Freeman of Ashland.

An interesting address on the new law as to treating employees under compensation, was delivered by Dr. Lewi Donhauser of Albany. W. H. Grey explained in detail the new law as it affected physicians treating injured persons under compensation.

Kings County

IN AN EFFORT to widen the scope of nursing service in Brooklyn, the nursing committee of the Kings County Medical Society has circulated a questionnaire among society members interested in the nursing situation.

Dr. Alec N. Thomson of the society announced that the survey was entirely un-

official, but added that the committee's findings might spur the Kings medical unit to take some constructive action toward improving nursing conditions.

Many Brooklyn physicians believe, Dr. Thomson said, that there would be fewer pneumonia and other fatalities if patients only knew that nursing was available at low cost.

The King's Society's nursing committee believes it would be possible so to disseminate publicity on nursing possibilities that the public would respond by employing nurses, lightening the task of the doctors and giving the patients themselves a better chance to recover more speedily from their illnesses.

Dr. Thomson conceded that such a publicity program, if carried out, might tend to reduce the amount of hospital care and increase the amount of home care, since patients frequently are kept from obtaining proper treatment by fear of hospital costs.

MEMBERS OF THE KINGS COUNTY Medical Society have been warned to notify police and the State and City Departments of Health whenever they see blood pressure reading being given gullible persons by laymen in drug stores, and in penny arcades where concessions, according to the society, have been let out to quacks.

The only value in having blood pressure readings taken is to guide physicians in treatment of patients. The amount the reading registers, even though the layman does not believe his pressure normal, does not always make much difference.

Blood pressures taken by unlicensed people should not be permitted, for they do nothing except frighten a person in one instance, or lull him into a dangerous sense of security in another.

Monroe County

CHILDREN'S HEALTH HOURS may be established by Rochester physicians as part of their regular office practice in the near future. The Public Health Committee of the Medical Society of Monroe County has approved the recommendations of the Child Welfare and Tuberculosis subcommittees of the State Medical Society to undertake a new program of information to the profession.

The plan was outlined before the state medical group in Albany recently by Dr. Edward G. Whipple and provides for the setting aside of a period during which physicians will give protective treatment, including smallpox vaccination, diphtheria immunization, diagnostic tests including the tuberculosis skin test and periodic examinations.

Nassau County

DR FRIDERICK C HOLDEN, obstetrician and gynecologist at the Bellevue hospital, New York City, was the guest speaker at the scientific session of the Medical Society of the County of Nassau at the Nassau Bar Association Home, Mineola, on Sept 24.

Dr George A Newton of Freeport, president of the society, welcomed seven new members.

New York County

CERTIFIED MILK PASTEURIZED was placed on sale for the first time in the metropolitan New York area in October, it was announced by Dr James A Tobey chairman, committee on public relations of the Metropolitan Certified Milk Producers, Inc., following a meeting of the New York County Medical Society Milk Commission held at the office of Dr Walter Lester Carr, Secretary of the Commission, 112 East Seventy-fourth street.

At its meeting, the New York County Medical Society Milk Commission voted approval of the sale of certified milk pasteurized in New York County. Similar approval has been voted previously by the Milk Commission of the Medical Society of the County of Kings, by the Hudson County, N J Medical Milk Commission and by other commissions of the metropolitan area. Producers of certified milk in this area offered the new product while continuing to sell the regular certified milk.

Oswego County

THE MEDICAL SOCIETY of Oswego County met on Oct 15 at the Elks Club in Oswego for its 115th annual session and listened to interesting papers by Leon A Sutton, MD, FACS of Syracuse on "Local Anesthesia in Minor Surgery," and Frederick S Wetherall, MD, FACS of Syracuse, chairman of the Fifth District Economic Committee, on "Present Day Problems in Medical Economics."

Queens County

DR MORRIS BENDER, President of the Queens County Medical Society, opposes the plan of the Works Progress Administration to obtain employment for colored women as housekeepers and practical nurses in the homes of relief recipients who are ailing or infirm.

Pointing out that under present relief regulations any ill person must be sent to the hospital after five days, Dr Bender said:

If this is purely a maid service or a house keeping service I can see no objection to it but I would object to any infringement on the

nursing profession. The plight of the unemployed nurse in New York City is a very serious one at the present time. There are thousands of such nurses around the city for whom any sort of relief would be a Godsend. In many cases they have had to take any kind of work in order to live.

He said the matter would be discussed at the next meeting of the Queens Medical Society, when more information on the PWA plans would be available.

Schoharie County

DR RAEBURN J WHARTON, major in the United States Army medical officers reserve corps and president of the Binghamton Reserve Officers' Association, addressed the Schoharie County Medical Society, Oct 8, at Cobleskill on "Anorexia in Childhood."

Suffolk County

DR CHARLES MILLER at the first showing of his turkeys at the Suffolk County Poultry Show, carried away the blue ribbon of the Turkey Section. Which lends the Bulletin of the Queens County Medical Society to remark:

"The psychiatrists tell us that we should all have hobbies to offset the psychic shocks incident to our daily lives. Not all of us, however, pursue our hobbies with equal success. Thanksgiving Day is not so far off so we wish Dr Miller continued success in his efforts."

Ulster County

THE ULSTER COUNTY Medical Society held a regular meeting on Oct 24 at the Governor Clinton Hotel in Kingston. The meeting was attended by a large number of doctors who represented all parts of the county. Routine business was transacted.

Wyoming County

THE ANNUAL MEETING of the Wyoming County Medical Society was held at Warsaw, October 9th. The following officers were elected for 1936: *President*, Dr C H Harville, Warsaw; *Vice President*, Dr G W Nairn, Warsaw; *Secretary-Treasurer*, Dr O T Ghent, Warsaw; *Delegate to the State Society*, Dr L L Klostermyer, Warsaw; *Alternate*, Dr Henry S Martin, Warsaw.

The scientific meeting was devoted to a discussion of Pneumonia by Dr Nelson G Russell, Professor of Medicine, Buffalo Medical School. Points in diagnosis were thoroughly discussed including the demonstration of rapid typing methods. Treatment was discussed with special emphasis on newer methods of treatment including serum and oxygen administration and the use of pneumothorax.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Malpractice—Removal of Uvula During Tonsillectomy

A case decided a short time ago in a nearby jurisdiction* is an interesting example of the application of the rule that in a malpractice case where negligence is proved, injuries actually resulting from that negligence must be shown to hold a doctor responsible in damages.

The case arose out of the removal of the tonsils of a child six years of age. The patient was one of several who were assigned to Dr. S. for operation under his care. The actual operation was performed by a fifth-year medical student not licensed to practice who was an interne at the hospital, but the interne was actually supervised by Dr. S. During the operation the dissection was followed by a hemorrhage which was more severe than anticipated and the bleeding caused the child to choke and gag. The result was that the patient's uvula became engaged in the snare, and the operative field became obscured, so that when the interne operated the snare to remove the tonsil a portion of the uvula was also removed. At that stage in the operation Dr. S. stepped in and applied a sponge and sutures to stop the bleeding. He also proceeded with the removal of the second tonsil, and again a hemorrhage developed and further suturing was necessary.

Subsequently an action was brought against Dr. S. on behalf of the child, charging that he or some person under his supervision and control had been negligent in the performance of the operation and that as a result it was claimed that the child had suffered certain injuries. The plaintiff specifically claimed that the child as a result of the operation had lost her sense of taste, and that her speech had become harsh with a nasal tone, and further that she was unable to properly swallow food.

Upon the trial there was testimony in behalf of the plaintiff from which it might be interpreted that the precautions usually taken to prevent the uvula from becoming engaged in the snare had not been taken upon the operation. The question that developed as the main point involved in the case was whether, assuming negligence, there were any actual damages resulting from such negligence.

The medical witness called on behalf of

the plaintiff testified that he had examined the child, and had found only a part of the uvula missing. He admitted in the course of his testimony that he really did not know the function of the uvula, and gave the following answer:

"Q. Doctor, this uvula is not important?

"A. It is not causing her trouble, not the uvula; it is not the uvula that is at fault."

The defendant's expert gave in part the following testimony on the trial:

"Q. Tell me, doctor, looking into that little girl's throat, do you see anything there to prevent her swallowing?

"A. No, I do not. I think she can—she may have a little stiffness for a time, that is a thing we see at times following an operative procedure. It is a bit more likely to come in an adult, but even in children who have had some throat inflammations, for quite a little time they will have a little difficulty in swallowing, not marked. . . . I do not believe that the uvula has been a factor in this case at all. I think your problem that you are dealing with is a matter of the scar associated with the suturing to control hemorrhage.

"Q. Let me understand the hemorrhage results, does it, from the dissecting?

"A. Results from the dissection.

"Q. And it is increased, or is the amount of the suturing increased, by the removal of the uvula?

"A. No.

"Q. Then I want to know how much effect upon the child's present condition the getting of uvula into the snare and the removal of the uvula has had?

"A. I do not believe that that feature has anything to do with it. I really think that the difficulty that she is complaining of and which has been more persistent than most—I will grant that—is not due to the removal of the uvula at all, it is due to the matter of the control of hemorrhage, and the necessity of putting the sutures pretty deeply to control that. It is not the result of the removal of the uvula. . . . If you look in there and see the uvula amputated, they think, well, that looks funny, and frequently there is some statement made about it, but I honestly believe that so far as the patient is concerned it has absolutely no damage."

The Trial Court determined that no damages properly attributable to the claimed negligence had been proved under the negligence, and therefore, dismissed the action. An appeal was taken from the judg-

* McNamara v. Smith, 2 D. L. R. 1934-417.

ment of dismissal and the Appellate Court after reviving the case affirmed the lower Court's ruling. In the course of its opinion the Court said:

Unless therefore substantial damages can be awarded, the judgment of the learned trial Judge should not be disturbed.

From the evidence there would seem to be no doubt that the infant plaintiff has suffered certain disabilities. But the evidence makes it clear that these did not result from the loss of the uvula nor from any increase in the amount of suturing necessitated by its removal.

The Court further said, commenting upon the testimony of the experts:

This witness (defendant's expert) might, perhaps, be suspected of partiality, but the evidence of Dr. T., called on behalf of the plaintiff is almost equally negative. He said, "It is not causing her trouble, not the uvula; it is not the uvula that is at fault." No witness was found to attribute the child's disabilities to the loss of her uvula or to any increased suturing necessitated by its removal. Nor did any witness say, nor must it be assumed, that the uvula is by itself of any specific importance. The farthest Dr. T. would go in this respect was to say that if the uvula were totally removed . . . "it might interfere with the action of the palate."

In an action for negligence, the plaintiff must prove not only that there was negligence but also that any injuries complained of were the direct result of such negligence. In this case the learned trial judge found that the plaintiffs had failed to do this, and in view of the evidence it is impossible to say that his finding was wrong.

Electro-Coagulation of Tonsils

A middle aged man consulted a physician, specializing in ear, nose, and throat work, with respect to complaints of rheumatic pains in his legs. The doctor examined him and found that he was suffering from hypertrophied and diseased tonsils and suggested their removal. As the man did not desire to be prevented from attending to his occupation arrangements were made whereby the doctor undertook to treat him by the electro-coagulation method. It was explained that a number of such treatments would be necessary. Several electro-coagulation treatments were administered over a period of two months and at the end of that time the patient consulted the doctor with respect to a hemorrhage from his right nostril. He saw the patient for a few days with respect to that condition and it subsided, and explained to the patient that further electro-coagulation treatments should be resumed in a short time. The patient did not return for such treatments although the doctor saw him on a subsequent occasion when it was agreed between them that the treatments should be resumed. The doctor never made any repre-

sentations to the patient that the tonsils had been completely removed by diathermy.

After considerable time had elapsed the doctor instituted an action against the patient to recover the amount of his bill. The patient interposed a defense and counterclaim charging that the plaintiff had committed malpractice in the treatment which he had rendered. The case came on for trial as a non-jury case and the patient established that subsequent to the treatment which the plaintiff doctor had rendered he had gone to another doctor who had removed the remaining portions of the tonsils. He tried to establish that he had been discharged as cured by the plaintiff.

At the conclusion of all the testimony the Court rendered a verdict in favor of the doctor for the amount of his bill and dismissed the counterclaim of malpractice.

Recurrence of Gall Stones

A young married woman was referred to a physician who had for many years specialized in general surgery. Examination led to a diagnosis of cholecystitis and appendicitis and operation was advised. X-rays and pathological tests confirmed the diagnosis. An operation was performed which consisted of the removal of the appendix and gallbladder through an upper right rectus incision. The appendix was found swollen, chronically inflamed and adherent to the omentum. A large stone the size of a marble was found in the cystic duct and the gallbladder and the stone were removed. The ducts were carefully palpated by the surgeon and no other stones were found. The patient remained in the hospital about three weeks and had an uneventful recovery.

Sometime later it was reported to the doctor who had performed the operation that the patient had been operated on by another doctor for the removal of other stones.

A malpractice action was brought against the surgeon in which the principal claim was that in the performance of his operation he had failed to remove all of the stones and that a subsequent operation had become necessary. It was also claimed that at the time he operated the surgeon was himself not in sufficiently good physical condition to properly perform the operation. The reason for the latter charge apparently was that sometime subsequent to the performance of the operation the defendant became invalided. Before the case could be reached for trial he died. Application was made to the Court in order that the case might be marked abated by reason of defendant's death. Thereupon plaintiff's attorney consented to discontinue the action.

Across the Desk

"Nuts, Squealers, and Regulars"

SOME OF THE CRIPPLE CREEK DOCTORS used to come to the meetings of the local medical society in the good old days with their six-shooters in their belts, and slept with the trusty guns under their pillows. To many of them "hard likker" was their social tea, and water belonged under bridges, but they were men of practical ability and supreme professional loyalty—in short, "they were God's own people," declares a doctor who knew them well and is now president of the Colorado State Medical Society, Dr. Walter W. King, of Denver.

He recalls in his presidential address the remark of a Leadville miner, that there are three kinds of poker-players: "Regulars," "squealers," and "nuts," and he proceeds to say that this is not a bad classification of the members of a Medical Society!

A statement like that looks as if it were good ground for a libel suit, a fight, or a foot-race, so it may be just as well to hasten on and tell what Dr. King means by it. It is not so bad as it seems. The nuts, it appears, are the research men, the animated interrogation points who dig deep into the unknown. They are "curious cusses," he says, and few in number, but they think, they ask strange questions, and they are the main source of the progress of medicine. They spend their energies tirelessly to make the world a better place to live in.

If those are the "nuts," what are the "squealers?" Well, they are the reformers. They like wild cards in the game. They call for a new deck. But we are warned not to get the idea that the squealers are not of value. They are the yeast in the wholesome bread of improvement, he says. True, they are complainers, but their criticism stimulates advancement. We should be in a bad way, a backward way, a way of stagnation, without them. Dr. King owns up that he is a "squealer."

The largest group are the "regulars." They call for no new decks or new games. No deuces wild for them, and "if the joker is used at all, it is only for aces, straights, and flushes." They are the backbone of the society. They are the "organization men" who give their time without stint, their effort and their money to keep the wheels of the organization going around. If they are called "the clique," they laugh it off and go on working for the good of all. They are the wheelhorses, always at the meetings, always ready to do their bit.

While others are telling what should be done, or are ready to boss the job, these men are ready to do the real work.

Is the Profession "Over-organized"?

SOMEWHERE AMONG THE CLASSES so pungently described by Dr. King must be the men who like to form new medical societies, for the number has multiplied to the point where Dr. Olin West, Secretary and General Manager of the American Medical Association, declared in an address that "we face a very dangerous problem in the fact that in a certain sense the medical profession is over-organized." It is a grave danger, as he sees it, because it brings a dissipation of fealty, a duplication of effort, a confusion in the public mind, and encourages propaganda of a destructive sort. He admits freely that some of these organizations fill a very useful purpose, but fears that the multiplicity of medical societies is really growing to be more of a detriment than a help.

Take actual examples. In one city of less than 300,000 Dr. West found an average of 29 medical meetings a week, as contrasted with one meeting of the county medical society a month. Was the county society helped or hurt by this situation? In another city of less than 400,000 there were 42 medical meetings a week, and the county society, "if it was lucky, got one meeting a month." Worse yet, in some places he found that the staff meetings of hospitals had been substituted for the scientific meetings of the county medical society, so that many members of the county society were cut off from all share in the scientific work. This situation he calls "dangerous to organized medicine," and he asks for our "careful, prayerful consideration" of it.

The basic medical organization in this country, of course, is made up of the county and state societies and the American Medical Association, and whatever helps that basic structure helps the profession; whatever hampers or weakens it injures the profession. There can be no question that many of the societies discovered by Dr. West are doing invaluable work in their own fields, of a sort that could not well be done in the county bodies. But 42 medical meetings a week in a city of 400,000 looks a bit excessive to the casual onlooker. It recalls the wife who asked a divorce because her husband was a "jiner." He "jined" so many lodges that he was never home. It is a mental bent that some have. It may explain why various county meetings are not better

supported. Perhaps it is time for surveys of the situation in our cities and counties to see if we are over-organized.

Big Man, Big Illness

THE TYPE OF MAN is familiar in this great land of ours who must always have something bigger than anyone else. His car must be grander, his house more palatial, his wife more bejewelled, than any other. But a Detroit magnate gives the type a new wrinkle. He thought he was too important to have a little illness—it just must be something serious. You don't believe it? It is set down in black and white in the *Medical News* of the motor city, where it happened. This important individual had a case of the "jitters," to use everyday lingo. He was highly nervous and irascible, due to loss of sleep and appetite. He needed a rest. His doctor took his blood pressure, listened to his heart, and prescribed mineral oil, sedatives, and a vacation. The magnate was furious. He knew he must have something very, very grave. So he called another doctor. Same verdict, same prescription, same rage. He saw another medical man, and another, and another, five in all. All prescribed mineral oil, sedatives, and a vacation. Total cost, \$25.

So he traveled many miles to a well known clinic, where his history was recorded at enormous length and, completely disrobed, he ran the gamut of inspections, palpations, auscultations, and percussions from head to foot. He spent hours in the x-ray and clinical laboratories. Specialists of assorted types scrutinized him with deep solemnity. At last, the verdict. He was advised to return in six months, to take mineral oil, sedatives, and a vacation. Total cost \$300, plus traveling expenses, plus hospitalization, plus a week's absence from business.

But he was satisfied. True, he did not have the grave illness, but he had gone through an examination worthy of his greatness and paid a bill suitable to his position in life. The next motor magnate who calls one of these five Detroit doctors will have an examination that will probe everything except the secrets of his conscience. The big man may not have a big

illness, but if he wants the other details large, he can be accommodated right at home.

"War Madness" Psychoanalyzed

THE SUPPER-PATRIOTS and 100-per-centers who want war declared at the drop of the hat have been psychoanalyzed by a group of no less than 339 psychiatrists of 30 nations. They warn us that the world may be pushed into a "war psychosis" if we do not resist. "There is in the world a mentality which entails grave dangers to mankind," they declare in a signed statement which has been sent to leading statesmen particularly in Europe, where this form of insanity seems all too common. The document is sponsored by the Netherlands Medical Association, which has followed it up by forming a "Committee on War Prophylaxis." Two Italian doctors, among others, have had the courage to sign the statement. Professor Dr. M. L. Bianchini, lieutenant colonel in the Italian Army reserve, and Professor T. del Greco, director of a psychopathic hospital in Aquila, Italy. American signers are Dr. Charles Macfie Campbell of the Boston Psychopathic Hospital, Dr. Alfred Gordon of Philadelphia and Dr. A. J. Rosanoff of Los Angeles.

The root of the trouble is the fact that the primitive fighting instincts of our savage ancestors still lie only a little below the surface of our natures. "Civilized, twentieth-century man still possesses strong, fierce, and destructive instincts," we are warned, "which have not been sublimated, or only partly so, and which break loose as soon as the community to which he belongs feels itself threatened by danger."

The savage instincts are easily roused by incendiary utterances of statesmen hungry for fame and power. When the war-shouters and flag wavers get into the saddle, then the people "become neurotic." "They may be carried away," declare these mental experts, "by hallucinations and delusions, thus involving themselves in adventures perilous to their own and other nations' safety."

If we have reached the point where war-madness is recognized as madness, that is something anyway.

"PANEL" TROUBLES

In Germany panel physicians who have been holding special office hours in clinics or hospitals have been compelled to give them up, under the rule that no doctor may have more than one place of practice. The rule even bars a doctor from opening a second office in a town having no physician. A startling case of wholesale recovery is

reported from Germany when inspectors were sent to find out if workers drawing sick pay were really sick. It seems that 2,008 were ordered to appear for examination. Eight hundred sixteen of them at once declared their complete recovery, 289 were found to be well. So nearly half of them were not ill at all.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Principles and Practice of Preventive Medicine. Edited by C. W. Hutt, M.D. and H. Hyslop Thomson, M.D. Two volumes. Quarto, illustrated. London, Methuen & Co., Ltd. 1935. Cloth, £3-13-6.

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles on Treatment, Medicine, Surgery, Neurology, etc. Volume 3, 45th Series. 1935. Edited by Louis Hamman, M.D. Octavo of 337 pages, illustrated. Philadelphia, J. B. Lippincott Company. 1935. Cloth. \$3.00.

Textbook of Attendant Nursing. By Katharine Shepard, R.N. and Charles H. Lawrence, M.D. Octavo of 433 pages, illustrated. New York, The Macmillan Company. 1935. Cloth. \$3.00.

Public Health Administration in the United States. By Wilson G. Smilie, M.D. Octavo of 458 pages, illustrated. New York, The Macmillan Company. 1935. Cloth, \$3.50.

Human Pathology. A Textbook by Howard T. Karsner, M.D. Fourth edition, revised. Octavo of 1013 pages, illustrated. Philadelphia, J. B. Lippincott Company. 1935.

I'd Live It Again. By Lieut.-Col. E. J. O'Meara. Duodecimo of 324 pages, illustrated. Philadelphia, J. B. Lippincott Company. 1935. Cloth, \$2.50.

A Treatise on Medical Jurisprudence. By Benton S. Oppenheimer, LL.B. Duodecimo of 290 pages. Baltimore, William Wood & Company. 1935. Cloth, \$4.00.

The Doctor and the Public. A Study of the Sociology, Economics, Ethics, and Philosophy of Medicine, Based on Medical History. By James P. Warbasse, M.D. Octavo of 572 pages, illustrated. New York, Paul B. Hoeber, Inc. 1935. Cloth, \$5.00.

The Story of Medicine in the Middle Ages. By David Riesman, M.D. Octavo of 402 pages, illustrated. New York, Paul B. Hoeber, Inc. 1935. Cloth, \$5.00.

I and Me a Study of the Self. By E. Graham Howe. Duodecimo of 256 pages, illustrated. London, Faber & Faber, Ltd. 1935. Cloth, 7/6.

The Medical Formulary and Prescription Manual. By Morris Dauer, Ph.G. First edition. 16mo of 297 pages. New York, J. J. Little & Ives Company. 1935. Cloth.

Daily Log for Physicians. By Dr. Colwell. A Brief, Simple, Accurate Financial Record for the Physician's Desk. Quarto. Champaign, Ill., Colwell Publishing Co. 1936.

Practical Clinical Psychiatry for Students and Practitioners. By Edward A. Strecker, M.D. and Franklin G. Ebaugh, M.D. Fourth edition. Octavo of 705 pages, illustrated. Philadelphia, P. Blakiston's Son & Co. 1935. Cloth, \$5.00.

Diseases of the Nose and Throat for Practitioners and Students. By Charles J. Imperatori, M.D. and Herman J. Burman, M.D. Octavo of 723 pages, illustrated. Philadelphia, J. B. Lippincott Company. 1935. Cloth, \$7.00.

REVIEWED

Alcohol and Anaesthesia. By W. BurrIDGE, D.M. Octavo of 65 pages. London, Williams & Norgate, Ltd., 934. Cloth 2/6.

For a book of only 60-odd pages, *Alcohol and Anaesthesia* contains more than its share of stimulating and unusual views, many of them entirely opposed to the present theories of muscle and nerve physiology. According to the author, alcohol exerts an independent action of exaltation and depression on the same tissue at the same time. In order to explain these apparently paradoxical effects, he has abandoned the accepted conceptions and has elaborated another based upon the newer

work on colloidal systems. He prefaces his rather complex theory by stating that the properties of muscle and nerve must depend upon the colloidal system which constitutes them. Energy manifestation can therefore come from two sources: through what is known as aggregation changes and through adsorption changes. According to him, alcohol decreases the muscular excitation energy which is derived from the adsorption phenomena and increases that available in the colloidal aggregation state. Consequently it both stimulates and depresses, the resultant effect depending upon the state of the muscle previous to the administration

and other contributing factors. For example, in perfusing a heart with Ringer's solution, if the amount of calcium in the solution is sufficient to cause the heart to beat maximally, then on addition of alcohol, its stimulant effect is unable to manifest itself and only depression is noted.

The above is characteristic of the type of experiments performed and the reasoning indulged in by the author throughout the book. Numerous analogies and philosophical asides help to clarify the subject matter. Although the experimental data are by no means conclusive, still the theories elaborated make interesting and worthwhile reading, if only since they stimulate the desire to defend the current views discarded so peremptorily by the author.

DAVID I. ABRAMSON

Aids to Obstetrics. By Leslie Williams, M.D. Tenth Edition. 16mo. of 219 pages. Baltimore, William Wood & Company, 1934. Cloth, \$1.25.

This small pocket-size book of 220 pages gives a bird's-eye view of the internal generative organs, of pregnancy, normal and abnormal labor, and the complications of the puerperium.

It is surprising that in such a small book, the author is able to give such a good view of the subject. He eliminates all non-essential details, and uses simple, terse language for his descriptions.

The book is up to date in its theory and treatment, and it will be of great use in giving a brief summary of a large and intricate subject.

W. S. SMITH

A Decade of Progress in Eugenics. Scientific Papers of the Third International Congress of Eugenics, held at American Museum of Natural History, New York, August 21-23, 1932. 8vo. of 531 pages. Baltimore, The Williams & Wilkins Company, 1934. Cloth, \$6.00.

In this book we find a complete report of the proceedings and of the sixty-five scientific papers read at the third International Congress of Eugenics held in New York in 1932. Its contributors represent the four corners of the globe, and include such personalities as Osborn, Leonard Darwin, and Davenport.

The dissertations are, in the main, academic and lofty. And while, in some instances, certain practical suggestions are advanced to further the cause of eugenics, they are in most cases speculative; and include such measures as control of immigration, prevention of racial amalgamation, selective sterilization, and eradication of foci of infection.

That eugenics is a worthy branch of scientific endeavor goes without saying. That its importance is and was recognized for many centuries, in such diseases as hemophilia (long before the inception of eugenics as a branch of science) must also be admitted. But as to how far the teachings of eugenis in bettering the stock of humanity can be applied to actual practice or can reap for them positive results is another story which, in our present stage of civilized development, is extremely difficult to envision.

EMANUEL KRIMSKY

Human Anatomy, Double Dissection Method. By Dudley J. Morton. First and Second Dissections Quarto of 265 pages, illustrated. New York, Columbia University Press, 1934. Cloth, \$6.00.

The Double Dissection Method enables the student in anatomy to cover the subject thoroughly with a great saving in curricular time. This method is in use at the present time at the College of Physicians and Surgeons and in that institution it was necessitated by a change in the course in anatomy, from two, to one year.

The author stresses the importance of studying the body while dissecting with as little use as possible of the books.

The first volume gives instructions and spaces for notes, on the larger structures and organs of the body. The last 50 pages in this volume are devoted to space for the dissector to fill in as he carries on the dissection of the various parts of the body. The same idea is also incorporated throughout the volume which contains as well, black and white sketches where muscles, nerves, and so on can be drawn. There is usually a key sketch for this purpose. It would seem that this method of dissecting is an excellent one. The student is taught to think about the action of the structures he is dissecting, for instance; it is suggested that he analyze the different muscle actions of the joints of the upper extremities by various muscular efforts, as rowing, swimming, shot-put, and so on. Most of the basic ideas incorporated in this form of teaching are not new, but this is the first time, we believe, that they have been so well arranged in book form where they can be valuable to all students in anatomy.

The second volume covers the second dissection which is a more detailed study of particularly the nervous and vascular systems, for the student is at this time better able to co-ordinate the body as a living physiological unit.

The second volume follows a different regional sequence because it is devoted primarily to the various systems. The author

suggests the free use of atlases during the dissection by this method.

The second volume also follows the same method of note writing and sketching as in the first volume.

Unquestionably this is an excellent and simplified method of teaching anatomy and should be adopted universally in the medical schools.

HERBERT T. WIKLE

Outlines for Psychiatric Examinations.

Edited by Clarence O. Cheney, M.D. Octavo of 134 pages. Utica, N. Y., State Hospitals Press, 1934. Cloth, \$1.50.

This book of 134 pages is a revision and amplification of a similar guide edited by Dr. G. H. Kirby. Its origin may be traced back to Dr. Adolf Meyer who gave some helpful advice in recording psychiatric history and observations. This book is a guide to collecting historical data, physical and mental symptoms of adults and children, and formulating these data into a summary for interpretation, diagnosis and treatment.

One chapter is a descriptive classification of mental disease and finally there is a descriptive classification of problem children.

The book has served well the New York State Hospital physicians and is highly recommended to medical students and physicians in private practice who may have psychiatric interests.

A. E. SOPER

Disease, Gadfly of the Mind. By Wm. Allen Pusey, M.D. Octavo of 20 pages. London, H. K. Lewis & Co., 1934.

This is a most entertaining essay, written in the author's delightfully easy readable style, on disease as a stimulant of the mind. One may get an idea of the contents of the book from the following excerpts: "The human mind has had to develop itself. Man started at a cultural zero and had to find out everything for himself. The tracing of the making of the mind is, therefore, not a psychological or physiological, but a historical study of its progress. Thinking is not spontaneous because of the pleasure of intellectual exercise but because of prods from sharp necessity. Primitive man in the moments spared from the search of food speculated on how he could better preserve life. His endeavors to overcome injuries and disease were the first steps in medicine and no incentives to thought were earlier, or acted more continuously upon man's mind than his physical ills."

From then on the history and importance of medicine and particularly that branch of medicine, diseases of the skin, as a stimulant to the mind is traced.

Doctor Pusey shows that from the study

of the skin have been obtained our first knowledge of histology, pathology, bacteriology, contagion, infection and immunity, allergy and metabolism. Continuing, the author states that even now, when we may surely say that the mind has reached a stage of light, in knowledge of the physical world, the skin still furnishes one of the most fruitful fields of research, because it offers opportunity for searching out the finer facts of biology and pathology.

Doctor Pusey has made a study of the history of medicine and has written a splendid book on the History of Dermatology. Anything he contributes is always most interesting and instructive.

We highly recommend this booklet for a most delightful half-hour of reading.

ALFRED POTTER

Aids to Phychiatry. By W. S. Dawson. Third edition. Sexdecimo of 318 pages. Baltimore, William Wood & Co., 1934. Cloth, \$1.50.

This pocket-size book of 348 pages deals in clear-cut fashion with the different phases and types of mental disease and treatment. It is convenient for quick reference, and although diminutive resembles in its scope the larger reference books on psychiatry. It is surprising how exhaustively this small volume deals with the subject. Certain legal phases dealt with from the standpoint of the British Psychiatrist are, for that reason, more serviceable to him. There is little doubt of its value to the medical student and junior medical officers in a mental hospital.

A. E. SOPER

Standard Classified Nomenclature of Disease. Compiled by the National Conference on Nomenclature of Disease. Edited by H. B. Logie, M.D. Duodecimo of 870 pages. New York, The Commonwealth fund, 1935. Cloth, \$3.50.

This is a national nomenclature developed through the co-operation of 27 national societies and governmental bureaus. The confusing lack of uniformity in terminology created the need for a nomenclature, national in its scope. It takes into account both the etiology of the disease and the part of the body affected, making it impossible to state symptoms instead of making a complete diagnosis. There is a numerical index allowing the expression of every diagnosis by a code number.

The classification and nomenclature is undoubtedly more scientific and complete than any previous one. It has been installed in the record rooms of 120 of the most important hospitals in the country, including those affiliated with the leading medical colleges.

W. E. MCCOLLOM

TRICHOBEZOAR
(Hair-Cast of Stomach)CARLTON F. POTTER, M.D., *Syracuse*

Foreign bodies in the stomach are of frequent occurrence, but those composed of hair are so unusual that they are most spectacular.

These hair objects build up from a small nucleus and gradually become larger until they often fill the entire stomach cavity at which time such distress is produced that the individual is prone to seek medical or surgical advice. The size and shape of these objects vary, depending upon how much hair has been ingested and the length of time they have been in the stomach. Should two or more hair-balls be present, they may be found on removal, to be faceted. This is caused by the peristaltic action of the stomach rubbing the foreign bodies together. A single hair-ball or cast is the most frequent finding.

It is a well known fact that hair-balls commonly occur in animals, and it has been thought that these foreign bodies had considerable charm in warding off disease or acting as emetics in certain types of poisoning. Indeed, nature is kind to animals, causing expulsion by mouth of such irritating objects, thus emptying the stomach of materials not easily assimilated.

The hair-balls seen in the human are the result of the ingestion of certain substances, such as persimmon seeds, found particularly in Southern states, hair, nails, wooden objects, glass, etc. Hair eating is most frequently found in the adolescent female. This is readily understandable as the habit of putting the hair in the mouth, pulling it through the teeth or biting the

ends of their braided tresses, allows some of it to slide down the esophagus without much difficulty. Usually, these hair eaters are of a normal mentality. Insane persons, as a rule, eat more solid objects such as bits of wood, tacks, nails, glass, spoons, and other objects.

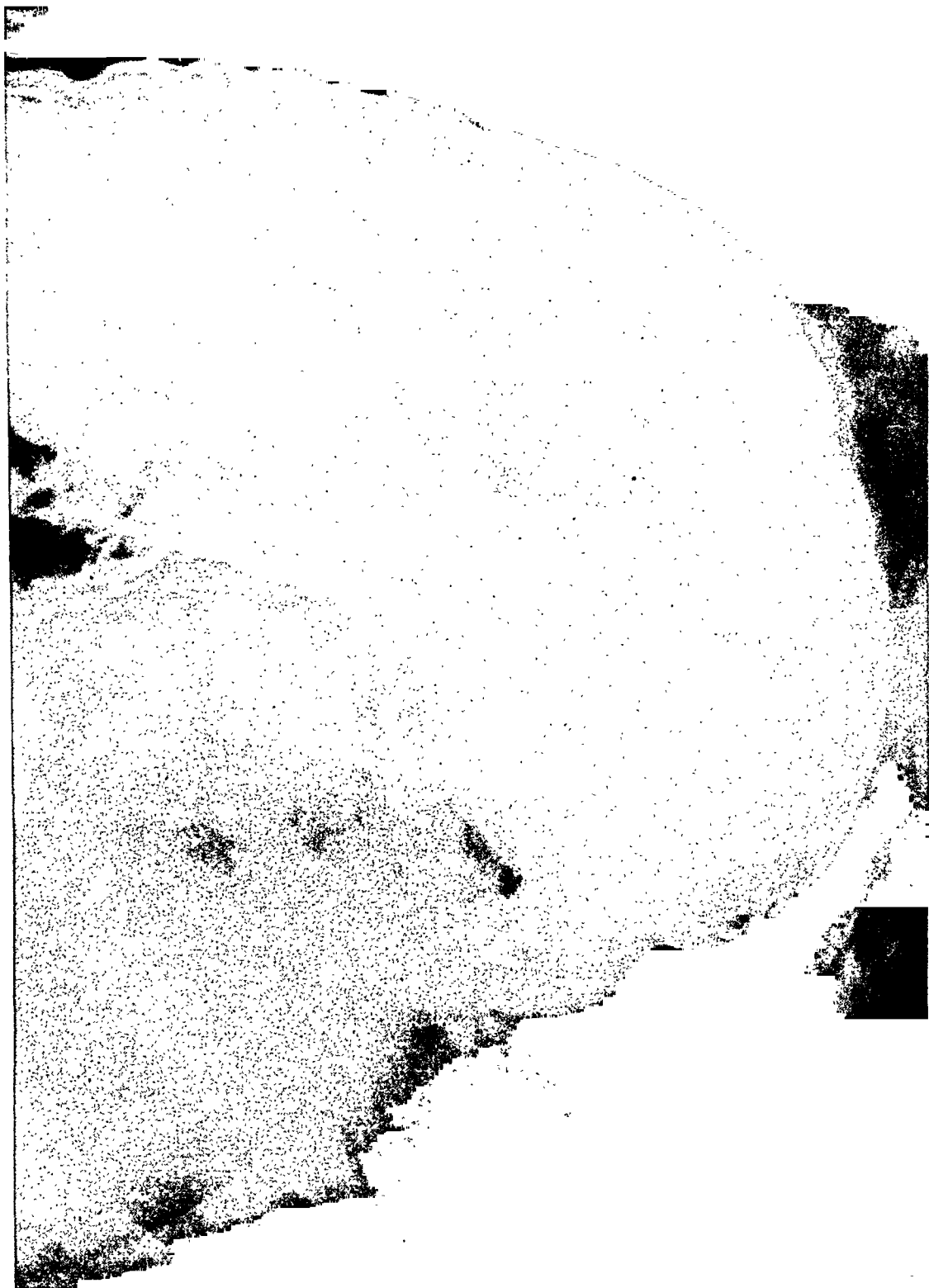
Hair-balls vary in size and shape, and long continued action of the gastric juice does not seem to affect the color or texture of the hair. Even when large masses of hair remain in the stomach for long periods of time, the individual does not seem to suffer a great deal, nor is her general health affected to any great extent. When these foreign bodies fill the stomach or act as a ball valve at the pylorus, nature rebels.

Pain is an early symptom together with some vomiting. If the mass is large, the individual complains that she is unable to eat as much as formerly. One of the earliest symptoms is the presence of an abdominal mass.

In these cases, a differential diagnosis must be made between carcinoma of the stomach, displaced spleen, floating kidney, fecal impaction, omental tumors, retroperitoneal hematoma or intragastric tumors. These hair masses may pass through the pylorus into the small intestine and cause an intestinal obstruction¹ and have been known to produce a perforation, resulting in death.²

It is a curious explanation which these hair eaters give for their habit. One stated that she ingested her hair because it was so nice.³ Another stated that for years she had been in the habit of eating the

*Read at the Annual Meeting of The Medical Society of the State of New York,
Albany, May 14, 1935*



combings of her hair and her sewing cotton ends to clear her tongue.⁴ Another confessed that she swallowed hers to make her voice clear.⁵ Another because she liked the tickling sensation produced by the hair in its transit to the stomach.⁶ Another adopted the method with suicidal intent.⁷ The case that I report absolutely denied that she had been eating her hair until she was shown a photograph of the hair-cast removed from her stomach.

This girl, 20 years of age, is of practically normal mentality, of Indian descent, residing on the Indian Reservation south of Syracuse. She was admitted to Crouse-Irving Hospital, Syracuse, N. Y., on September 24, 1934, her complaint being that about September 1, 1934, she began to have pain in the epigastrium, especially after eating, this pain radiating to the left of the navel. She also complained of indigestion and flatulence, vomiting occasionally, the vomiting and pain increasing.

Her past history showed that she had the usual children's diseases. Tonsils and adenoids were removed some time ago. Two years ago, she had erysipelas, was very sick and her hair came out. It has not grown in and she wears a cap on account of her baldness. She states she was never jaundiced and she denies venereal disease.

Her family history showed that her mother died of heart disease, age unknown. Sister and brother died of pneumonia, ages unknown. Her father, one sister and one brother are living and well.

Examination showed an adolescent female, 5 ft. 3 inches in height, usual weight 128 pounds, present weight 128 pounds. Eyes, ears, and nose normal, teeth in good condition. No evidence of enlarged thyroid, no enlarged glands. Chest well formed, expansion good. Heart,—no murmurs. Lungs,—no cough, no adventitious sounds. Blood pressure was 120/70. Pulse volume and tension good.

The abdomen was tender over the epigastrium with an oval-shaped mass in the upper left which could be easily outlined on percussion. There was no tenderness over the appendiceal area. There was no ascites and no hernia. The abdomen was soft.

Menstruation began when twelve years of age, was regular and without pain, with moderate flow for four days. There was no trouble in urinating.

There was no edema of the extremities; the reflexes were normal, there was no ankle clonus nor Babinski.

Blood examination on Sept. 26, 1934, showed hemoglobin, 45%; red cells, 3,150,000; white cells, 13,700 with a differential

count of large monos. 5%; small monos. 18%; neutrophils, 77%; color index 1.7. There was a marked variation in size of the red cells, some variation in shape. The red cells were poorly filled.

Blood examination on Oct. 5, 1934, showed hemoglobin, 45%; red cells, 3,510,000; white cells, 15,150 with a differential count of large monos. 5%; small monos. 20%; neutrophils, 75%. There was some variation in the size and shape of the red cells, the red cells being poorly filled.

Urine examinations Sept. 28.—Yellow, clear, 1024, acid, minute trace albumin, no sugar, few red blood cells, few pus cells. Calcium oxalate crystals and squamous epithelial cells.

Oct. 6.—Yellow, clear, 1025, acid, minute trace albumin, no sugar, few pus cells, amorphous matter.

Oct. 7.—Yellow, cloudy, 1030, acid, no albumin, no sugar. Few leucocytes and squamous epithelial cells.

Sept. 26.—Blood Wasserman was negative.

Oct. 5.—Gastric analysis: Free HCL 20; total acidity 55.

X-ray examinations: X-ray studies, both fluoroscopically and by means of films, were made on two separate occasions.

The barium mixture passed through the esophagus without any difficulty, no x-ray pathology being present. The barium entered along the lesser curvature side of the stomach, at first collecting in its upper portion and then was projected toward the greater curvature, apparently going around an intragastric mass. It was then seen to fill the pyloric portion so that there was a definite decreased density in the body of the stomach.

The stomach was found to be large in size (see Fig. 1), filling approximately one-quarter of the abdomen. The barium was seen to pass through the pylorus into the duodenum. There were no defects in outline of the lesser or greater curvatures. The stomach, at the five hour period (see Fig. 2), showed scattered fragments of the barium, assuming the appearance of a mass, the size and shape of the stomach.

The jejunum and ileum were of a normal patency and the peristalsis rapid. The appendix was not visualized.

At the twenty-four hour period, the colon was well filled with the barium mixture with no definite x-ray pathology noted. At this time, the stomach was well outlined with irregular patches of barium. At the forty-eight hour period (see Fig. 3), the stomach was still well outlined, its appearance being that of a cast of the stomach and one got the impression that the opaque medium was scattered through an intragastric mass.

The conclusion reached, following this examination, was that there was an intragastric mass present giving the typical fluoroscopic and film defect and distribution of barium, suggesting a hair-cast. No med-

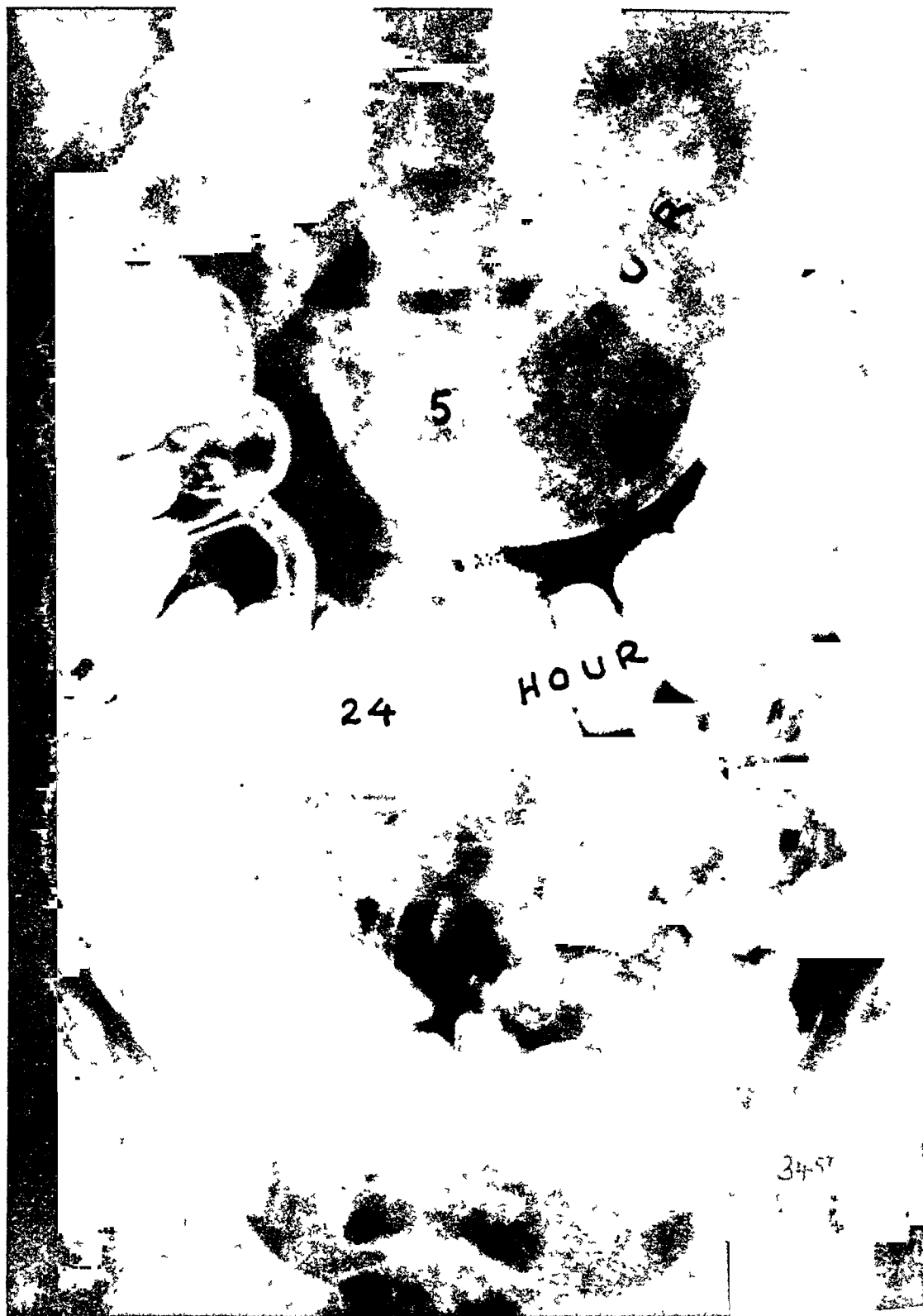


Fig 2 Double meal Showing five hour stomach and twenty-four hour barium in colon Note typical appearance of stomach at five hours



Fig. 3. Double meal. Stomach forty-eight hours. Showing irregular distribution of barium, with colon at sixty hour period.

ical or surgical diagnosis was made before operation except from the x-ray findings.

On October 6, the abdomen was opened above the navel by Dr. W. L. Wallace and a large stomach filled with a large hard mass was found. The stomach was pulled outside of the abdomen, a vertical incision made in the fundus and a large hair-cast

ing it. The secretion was removed with gauze. A small amount of hair entered the first portion of the duodenum but was still connected with the main part of the hair-cast. It was black in color and of fairly hard consistency. Its weight was 16½ ounces. The hairs were arranged longitudinally, the esophageal portion corresponding

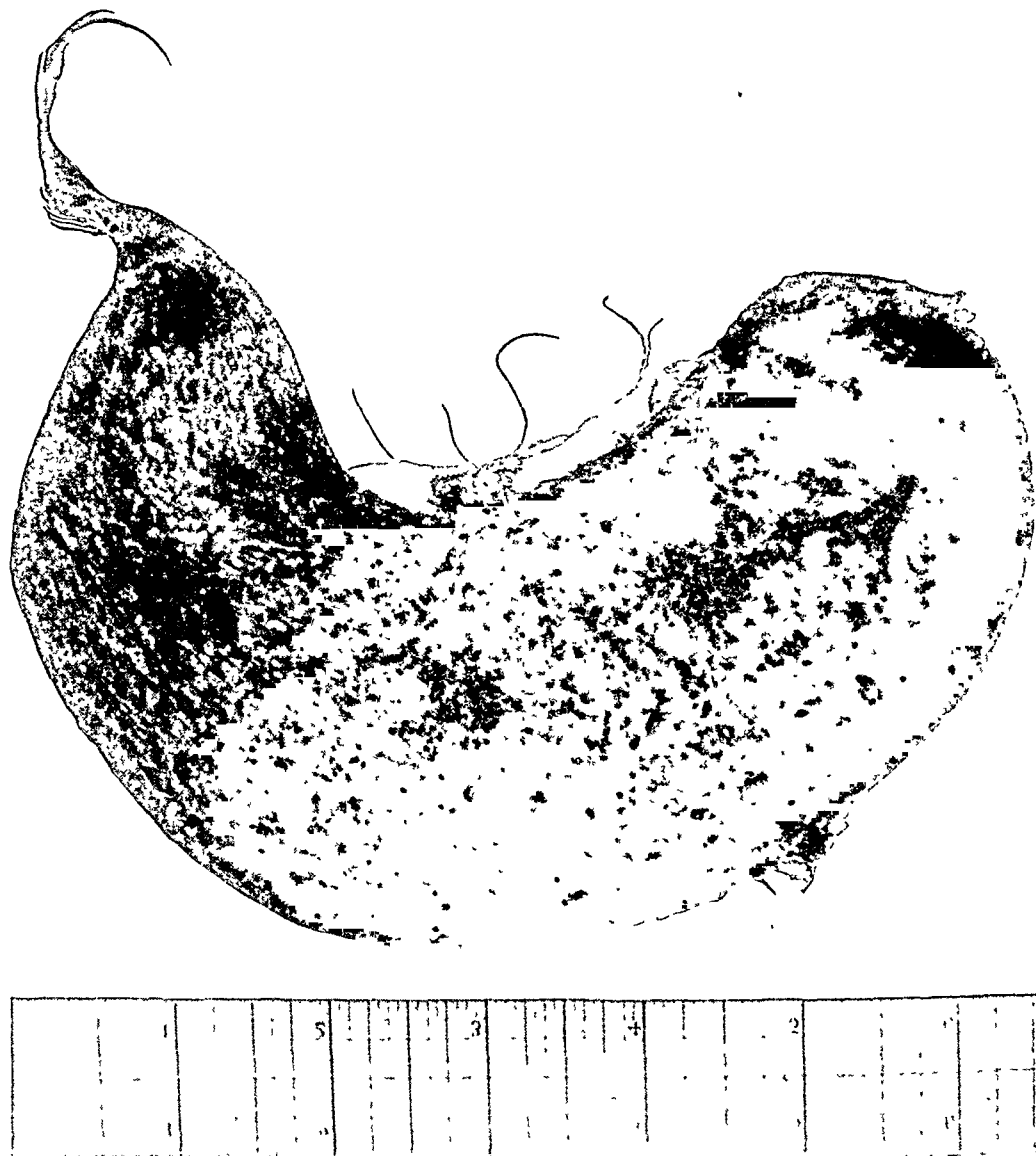


Fig. 4. Specimen of hair-cast showing unusual shape and comparative size.

removed with a towel clamp. The stomach wall showed no hypertrophy.

Examination of the specimen after removal (see Fig. 4), showed it to be the shape of the stomach and composed of hair with a fine layer of gastric secretion enclos-

to the shape of the stomach, while the duodenal end tapered off gradually to the pylorus. The specimen was an exact cast of the stomach. A better specimen could not have been obtained if the stomach had been filled with plaster paris.

The specimen measured 20 centimeters in circumference and $5\frac{1}{2}$ centimeters in diameter at the esophageal end; 20 centimeters in circumference and 7 centimeters in diameter at its middle portion; $14\frac{1}{2}$ centimeters in circumference and $4\frac{1}{2}$ centimeters in diameter near the pyloric end; 3 centimeters in circumference and one centimeter in diameter at the pylorus and 28 centimeters in length, measured along the greatest curved diameter.

Recovery was uneventful.

Conclusion

This case is reported (1) on account of its negative history. (2) The diagnosis could only have been made by x-ray examination. (3) The characteristic appearance and distribution of the opaque medium scattered through the interstices of the hair-cast, especially at the five-hour period. (4) The uneventful recovery of the individual.

CROUSE-IRVING HOSPITAL

References

1. Brewster: *Boston Med. & Surg. Journal*, 142:395, 1900, and *Abstract Med. Rec.*, 87:687, 1900.
2. Ritchie: *Edinburg Med. Journal*, 9:931, 1849.
3. Paton: *British Med. Journal*, 147, Jan. 18, 1902.
4. Thornton, Knowsley: *Tr. Path. Soc. London*, 35:199, 1886, and *Lancet. London*, 57, Jan. 9, 1886.
5. Schonborn: *Arch. F. Klin., Chir.*, 29:609, 1883, and *Berl. Klin. Wchnsch.*, 17:260, 1883.
6. Jacobson, N.: A Hair-Cast of the Stomach, *Med. News*, 36:245, 1901, and *Abst. J.A.M.A.*, 36:596, 1883.
7. Wren: *Internat. Jour. Surgery*, October, 1908.

BOOK REVIEWS

(For other reviews see pages 1218 and 1238)

Commoner Diseases of the Skin. National Medical Monographs. By S. William Becker, M.D. Duodecimo of 283 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

This book of slightly over 250 pages describes all of the commoner diseases of the skin rather briefly, paying more attention to the details of carrying out the therapy. The style throughout is that of the lecture before students, or a discourse before a diversified group of practitioners. The less common dermatoses that are to be considered in differential diagnosis, are presented with passing comment.

There are about eighty excellent illustrations scattered throughout the text. The closing chapter "Formulary" is extremely valuable. In it, under an alphabetical arrangement, the various drugs, or formulae, are listed; and the various considerations in the use of the drug, or prescription, are outlined.

E. ALMORE GAUVAIN

Abnormal Arterial Tension. By Edward J. Stieglitz, M.D. Duodecimo of 261 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

This monograph is exhaustive and presents in detail the present knowledge of abnormal arterial tension. General considerations of normal tension and its mechanism are given, followed by the etiology and symptoms of hypertension. The effect of

hypertension upon the cardiac, renal, and nervous systems are presented in separate chapters with treatment. The subject of hypotension is also discussed in its relation to surgery and shock. This volume is an excellent review of this difficult subject and gives the present day conception of the care of these patients.

HENRY M. MOSES

Diseases of the Chest. By J. Arthur Myers, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 385 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

In this small compact volume we have another excellent piece of work from the pen of Dr. J. Arthur Myers. Though small in size, it is quite comprehensive, covering a considerable field in diseases of the chest. Not only is tuberculosis in its various types embraced, but the most modern thoughts on the treatment of pneumonia, influenza, pneumoconiosis, new growths of the lung, bronchiectasis, pulmonary abscess, empyema, massive collapse of the lung, etc.

The book is not intended to be an encyclopedia of knowledge on these diseases, nor could it even be called a text book; but it is a very readable series of essays on various subjects of penetrating interest pertaining to diseases of the chest, and as such is a very valuable contribution to current literature on the subject.

FOSTER MURRAY

THE MYASTHENIC SYNDROME

Presentation of Case with Description and Discussion of the Findings in the Central Nervous System

CHARLES A. MCKENDREE, M.D., *New York City*
and
ABNER WOLF, M.D., *New York City*

The myasthenic syndrome is a well-established clinical entity that should be readily recognized when the symptoms and signs have fully developed. Very valuable contributions to the subject, both from the clinical and pathological aspects, have been made during the past thirty years, and it seems unnecessary to review the historical material, the conflicting pathological studies, and the descriptive clinical data in this modest report. Perhaps it will suffice to say that it is certain that in most instances, no noteworthy evidence of pathological alteration of the central nervous system has been found by competent observers. Altho lymphorrhages of the muscles have been found frequently,⁴ there is abundant material in which no muscular lesions have been reported. From the endocrinological point of view, the suprarenal,³ thymic,² parathyroid,⁵ ovarian, and pituitary glands have received a great deal of attention, and results that must be considered speculative from the angle of specific treatment, have been reported many times.

There is evidence that the myasthenic syndrome may follow epidemic encephalitis.^{8,9} However, it is still not known whether the clinical entity known as myasthenia gravis pseudo-paralytica is due primarily to disease of the central nervous system.

To date, as far as we are aware, no definite etiological factor has been established for the myasthenic syndrome. We recognize a set of symptoms and signs that constitute a clinical entity without etiological or pathological constants.

In this presentation, we shall not deal with treatment which has recently aroused so much interest. We recognize the fact that recoveries have occurred spontaneously without specific medication; that remissions are exceedingly common, and

that apparently endocrine therapy, irradiation of the thymus, strychnine in large doses, ephedrine,¹² glycine, and other drugs, have produced amelioration or a remission of symptoms.

We are presenting simply a case study with the necropsy findings without attempting to correlate the findings with the clinical manifestations in a specific way.

The case was first reported by one of us (McKendree) in the Meeting of the Section of Neurology and Psychiatry, at the New York Academy of Medicine, April 12th, 1927, and the patient was shown. At that time, the diagnosis of a post-encephalitic myasthenic syndrome was proposed. The bulk of the following clinical material was published in the *Bulletin of the New York Academy of Medicine*.¹⁴

The record of examination is that of October 18, 1926, and is followed by a general summary of progress, up to the time of death, on March 11th, 1930.

Patient, F. S., aged 21, single, female, occupation housework.* Admitted to the Neurological Institute of N. Y., October 18, 1926, A-12833H.

History

Chief Complaint, marked fatigability; date of onset of first symptom, February or March of 1919; character of the first symptom, general muscular weakness; onset, slow and insidious; course, progressive and then intermittent.

Illness: During the fall of 1918, the patient had a slight attack of influenza lasting about four days, and requiring only one day of bed-care, following which, she seemed to be perfectly well. During February or March, 1919, the patient began to experience generalized muscular weakness.

* Referred to one of us (McKendree) by the kindness of Dr. Robert E. Humphries.

Her first incapacitating symptom, after the onset of the gradual increase in weakness, occurred on March 1st, while walking down a flight of stairs, at which time her knees gave way and she fell down. She arose and walked, but felt weak. She walked home, a distance of eight blocks and during this effort, she was forced to rest at practically every block. She fell at least twice on the way home. Following the onset of the disturbance in February, she also noticed that in school, she could not read aloud as long as she could prior to this time, and in fact, she had to give up reading in one of the lower classes in school because she became so easily fatigued. She said that her tongue felt tense and that after reading, she could not enunciate well. After her experience of falling on the stairs and going home, she was forced to give up her gymnasium work because of the fact that she became extremely tired after the simplest form of exercise. At about this time she was under a mental strain studying diligently to attain graduation from school.

Following this onset, the symptoms progressed over the course of the next two years until, in the summer of 1921 she could take only a few steps without being obliged to hold the knees rigid in order to prevent falling to the floor. She could not feed herself on account of the weakness in her arms, her eyelids drooped and she stated that on account of the drooping of the eyelids, she felt very sleepy. She would fall asleep if she lay down at any time of the day. It was extremely difficult for her to talk, she could swallow but very little, and tired very easily.

Toward the end of that summer, while at the seashore, she began to improve, and enjoyed a general remission in the intensity of her symptoms. There was however a continuation of the easy fatigability, difficulty in reading and swallowing, and a reduction of the general activity which showed considerable variation. The variation might occur during each day, or definite changes might occur from one day to the next. She reacted very well to rest and improved considerably if rest was enforced. She had no idea what days were going to be good days, and the condition of weakness might come on within an hour.

During the summer of 1925 the patient spent her summer at the seashore; and on one day she felt unusually well, so that she could run and jump and even walked a mile alone. The remission was of very short duration, however, and the rest of the day, she felt as she had previously.

For a few years, the patient's eyes tired very quickly and when she became tired,

she experienced double vision, the objects being apparently side by side. The condition cleared up with rest. Direct forward gaze did not manifest diplopia except when she was very tired. For the same length of time she noticed a rather decreasing ability to look sidewise or vertically with any facility. Writing, walking, masticating and talking, in fact, every act consisting of continued muscular effort was greatly impaired.

In March 1926, she had a tonsillectomy, and following the operation, she remained in bed for 36 hours. On the next day, she felt much stronger, but later the weakness returned.

Over the entire course of her illness the patient has observed a decreased ability to learn and remember things. She has not been concerned or worried to any great degree about her difficulty.

Past History

Injuries and suggestive symptoms. At the age of 6, she was struck on the head with an icicle which caused no sequelae of importance. Her tonsils were removed in March 1926, under ether and she made a good recovery. She had diplopia in childhood, also chicken pox, measles and parotitis. She is still said to have tonsillitis occasionally. She had malarial fever in childhood and influenza in 1918. Her vision was good except for the fatigability of the ocular muscles. Five years previously she slept from 8 p. m. to 11 a. m. When 8-10 years of age, her mother said she had a habit of moving the mouth and lips.

Personal history. The patient was in the 8th grade in school when she was 14 years of age. She takes no tea or coffee, does not smoke or use drugs. She sleeps very well. Perhaps her sleeping is pathologically increased. Her appetite is good. She occasionally takes a little wine. Her bowels are constipated. Urination 8-10 times a day, none at night. Her periods are regular.

Family history. The patient's mother and father are living and well. She has two brothers and one sister, also living and well. The brother is nervous but the patient thinks this is from overwork. He is of the same general habitus as the patient and he used to have diplopia, but attributed this to eye muscle weakness.

Physical Examination

General appearance and cooperation. The patient cooperates perfectly, except for the fact that muscular fatigue prevents the sustained performance of some tests. She presents a somewhat peculiar appearance. The eyes are slightly prominent, the right

seems to show a very slight divergent strabismus. There is at times a definite widening of the palpebral fissures of both eyes and the appearance of a transient exophthalmos. She does not appear to be acutely or chronically ill, but there is an appearance of fatigue in the facial expression.

Abnormal attitudes and deformities. There are none other than the peculiarities mentioned above.

Gait. The gait is normal for the first few steps, but then becomes halting and that of a much fatigued individual. These peculiarities are brought out in other detailed tests for gait. The associated movements of the arms, head and trunk are present, but reduced in extent.

Coordination. The patient is right-handed.

Equilibratory. The patient stands well with the feet together, with the eyes open and closed, and also on one foot, but has some difficulty in maintaining her balance, not sufficient however, to be considered pathological.

Non-equilibratory. The finger-to-nose test is normally performed, as is also the finger-to-finger test. The finger-to-thumb test is well performed, but she tires very rapidly. The past pointing test is poorly done on account of the muscle disturbance, but she shows no constant lateral deviation. The tests of the lower extremities are well performed the first few times, but become imperfect if continued. Succession movements are poorly performed, chiefly on account of the recent weakness which affects the check element.

Skilled acts. She writes well; the speech is normal, except upon continued effort, when much more effort is required, and the voice becomes husky and the sounds somewhat indistinct.

Abnormal involuntary movements. None were noted, except for occasional protrusion and retraction movements of tongue.

Reflexes. The deep reflexes of the upper and lower extremities are all active and equal. The superficial reflexes of the abdomen and soles of the feet are absent, bilaterally.

Muscle strength. Muscle power throughout is poor except possibly in the forearms and the hands, where the grasp is well maintained for a short time, but becomes gradually weaker. In testing the forearm muscles, she flexes and extends her fingers 90 times in succession without any very marked fatigue. The effort, however, is not very active. The muscles of the shoulder girdle are quite weak. The same is true of the muscles of the hip and pelvic girdle,

while the extensors of the leg on the thigh are good for a brief period and then they readily fatigue.

Muscle status. The muscle tone is rather poor, the muscles throughout being rather soft and flabby.

Electrical reactions. The electrical reactions show the normal excitability to faradic current and the correct polarity in the galvanic reaction is present for all muscles tested. Faradic stimulation shows maintenance of tetanic contraction with application of the faradic current. After 40 consecutive stimulations, the left ulnar musculature shows some signs of fatigue. In none of the muscles is there the typical myasthenic reaction of Jolly.

Abnormal associated movements. None.
Meningeal irritation. Negative; no Kernig.

Sensory examination. The sensory examination is normal for all modalities.

Cranial Nerves

Olfactory nerve. The patient recognizes and names alcohol and vinegar readily.

Optic nerve. The visual acuity is normal in both eyes; the fields are complete and the fundi are normal, although the discs are somewhat oval vertically.

Oculomotor apparatus. The pupils are equal, measuring 5 mm. each in diameter, round and regular in shape, central in position. They react well to light, by direct stimulation and consensually, but the reaction to convergence and accommodation is only fair. In both eyes, there is a moderate exophthalmos, left greater than right. There is a slight right external strabismus on spontaneous direct gaze. The movements of the eyes are very much restricted.

The movement of the right eye to the right is very poor, and there is almost no upward or downward movement. The movement inward is good; this same thing is true of the left eye, but to a less extent. There is no definite nystagmus. The palpebral fissures are unequal, the left being greater than the right. At times there is a suggestion of ptosis.

Trigeminal nerve. Normal in the motor and sensory divisions: (see history of masticatory fatigue).

Facial nerve. The movement of the facial muscles in expression are rather reduced; there is no definite weakness in the volitional control except upon continued use of the facial muscles.

Acoustic nerve. Normal.

Glossopharyngeus and vagus nerves. Normal, except for the fatigability in the muscles of phonation and deglutition.

Spinal accessory nerve. Normal.

Hypoglossus nerves and tongue. The tongue protrudes in the midline, but the movement of the tongue becomes weakened upon continued exertion. There are occasional protrusion movements observed.

Systemic Examination

Tegumentary system. Normal.

Glandular status. There is apparent increase in the size of the thyroid. The tonsils have been removed and there is no lymphadenopathy.

Cardiovascular status. The pulse rate is quite variable, between 78 and 120 beats per minute. There is a considerable sinus arrhythmia which may account for the marked variations which are noted in the pulse rate; there are no murmurs heard and the heart is normal in size and outline. Blood pressure 110-68.

Respiratory system. The respiration rate is normal. The lungs seem normal to auscultation.

Gastrointestinal system. Normal.

Genitourinary system. Negative.

Skeletal system. Normal.

Mental status. History of difficulty in learning and retaining.

Laboratory Examinations

Blood Count

Hemoglobin	75%
Color index .....	.95
R.B.C.	3,900,000 per cubic mm.
W.B.C.	7,200
Neutrophils	70%
Small lymphs	28%
Large monos.	2%
Wasserman	Negative

Blood Chemistry

Urea	26 mgs. per 100 c.c. of blood
Urea N	12.1 mgs. per 100 c.c. of blood
Sugar .....	.083%

Spinal Fluid

Color	Clear
Pressure	Normal
Cells	6
Globulin	Negative
Wasserman	Negative
Colloidal gold	Negative
Protein	28 mgs.

Urine

Color	Light amber
Reaction	Acid
Sp. gr.	1020
Albumin	0
Sugar	0
Indican	0
Pus cells	Few leucocytes
Epithelia	Squamous

Basal metabolic rate. Plus eight.

X-ray examinations. Examination of the thorax shows a slightly increased shadow in the superior mediastinum with a very slight deviation of the trachea to the left. The apices are clear. The increased shadow noted may be due to a persistent thymus gland, although the shadow is not characteristically shaped.

Examination of the skull shows nothing remarkable about the calvarium. The circulatory channels are normally visible as are also the convolutional digitations. A small deposit of calcium is noted in the pineal gland. The basal angle is normal. The sella is shallow, somewhat angular, but not wide open. Petroclinoid bridging is beginning to form on the left. The air cell development appears normal.

From the time of presentation until the date of death, the patient was under constant direction by letter or by visits to one of us (McKendree). There were definite variations in general muscular fatigue as well as in the fatigue of the masticatory, articulatory, and swallowing apparatus. Absolute rest, sunshine, and soft foods constituted the chief treatment, together with symptomatic medication, such as hormotone, thyroid substance, ovarian extract, and dextro-maltose. The menstrual periods were irregular, but otherwise normal. For the greater part of the time, the patient had to hold her lower jaw during the process of mastication. Fatigue of the vocal apparatus was always present after prolonged talking. Swallowing was difficult at times, with regurgitation of soft foods or liquids through the nose. The ocular muscles became rapidly fatigued while watching motion pictures. At times the general body musculature was as strong at the end of the day as upon awakening, but frequently throughout the period of observation, fatigue of the muscles of the upper and lower extremities appeared after relatively slight exertion.

Gradually the general and local myasthenic symptoms progressed until the patient became practically bed-ridden. Difficulty in breathing, chewing, swallowing, and inability to use the extremities for minor exertion made it necessary to advise hospitalization.

At this time, the general neurological examination was the same as that previously recorded, except for marked emaci-

ation, and more marked myasthenic reactions. Swallowing was no longer possible and articulation was practically abolished. General exhaustion and inanition were marked features.

The patient was accordingly admitted to the Neurological Institute on March 6, 1930, where she died five days later, from general exhaustion, cardiac and respiratory failure.

Pathology

At autopsy the body appeared wasted and thin. The subcutaneous fat was 8 mm. in thickness. The muscles of the trunk and extremities were reduced in size and pale. The temporal muscles were similarly changed. Grossly neither the serous cavities nor viscera showed any notable changes. The thymus was represented by a small amount of pink, soft, indefinitely lobulated tissue in the upper anterior mediastinum. It appeared infiltrated with fat.

Microscopic examination of the heart revealed occasional aggregations of lymphocytes in the subepicardial fat. The myocardial fibres were small, uniform in size and appearance, and many contained deposits of lipochrome pigment. There were a few lymphoid collections in the myocardium.

Specimens of the rectus abdominis, pectoralis major, intercostal and temporal muscles and of the diaphragm, appeared essentially normal. There was no apparent change in the muscle fibres, their sheaths, or in the interstitial connective tissue. No focal collections of lymphocytes were observed.

The internal secretory glands examined proved to be essentially normal histologically. There was a small zone of atrophy in the cortex of one adrenal, in which only the glomerular layer was preserved. Aside from this the adrenals were unchanged. Their cortices contained a moderate amount of lipid material. Several cortical adenomata were present. The medulla showed good chromaffin staining. The capillaries throughout were somewhat engorged. In the thyroid the acini were large, thin-walled, and well filled with colloid, some of which had escaped into the stroma in places. No lymphocytic infiltration was present. The left ovary contained a large hemorrhagic

cyst. A few Graefian follicles and small corpora albicantia were noted microscopically. No mature ova or corpora hemorrhagica could be seen. The vessels at the hila were congested. The islands of Langerhans were normal. Aside from congestion the pituitary was quite normal.

The thymus consisted of numerous small cellular lobules embedded in loose fibrous and fatty tissue. Few small Hassall's corpuscles were present and some seemed to be forming. One was fibrosed. In places there appeared to be epithelial hyperplasia, conspicuous large vesicular nuclei occurring in groups near the centers of lobules.

The microscopic examination of all the other viscera proved negative.

Grossly, the brain was essentially normal. The cerebral hemispheres were symmetrical. The gyri were well rounded and the sulci of normal width. The gyral pattern was of modern complexity. The pia-arachnoid was thin and translucent throughout and the leptomeningeal arteries and veins moderately well-filled. The cerebellum and stem showed no external abnormalities. The basal vessels were thin-walled and delicate. On section no microscopic abnormalities were found in the cerebrum, cerebellum or brain stem. Unfortunately there was no permission for removal of the spinal cord.

The brain had been fixed entire in 10 per cent formalin. On section alternate blocks of the brain stem and basal ganglia were washed and refixed in Zenker's solution and 95 per cent alcohol.

The alcohol fixed material was cut serially and stained with cresyl-violet. Sections of the Zenker fixed material were stained with hematoxylin-eosin, phosphotungstic acid-hematoxylin, and Mallory's connective tissue stains. (At the time the present study was begun only the blocks described above were available and many additional stains that were desired could not be made.)

Blocks from many portions of the cerebrum and of the cerebellum were taken and sections of each studied by the above methods.

Perivascular infiltration was a steadily recurrent, but not frequent feature of the findings in the brain stem and basal ganglia. It consisted of from two to eight rows of cells comprised of plasma cells, lymphocytes

and occasional monocytes (see Figs. 1, 2, 3). Its occurrence can be given most easily in tabular form:

BRAIN STEM

Midbrain

Substantia nigra.....repeated
Red nucleus.....isolated
Cerebral peduncle.....isolated

Pons

Reticular formation....levels Nuclei IV and VI
cranial nerves repeated
Locus caeruleus.....isolated
Trapezoid body.....isolated
Adjacent to Nuclei VI cranial nerve. repeated
Superior Olive.....isolated

Medulla

Nucleus Gracilis and Cuneatus.....isolated
Nucleus XII cranial nerve.....isolated
Dorsal Nucleus X cranial nerve.....isolated
Inferior Olive.....isolated
Nucleus Inferior IX cranial nerve.....isolated
Nucleus of Ascending Sensory
Tract V cranial nerve.....repeated
Reticular formation—lower medulla....repeated
Anterior Horn—junction medulla
and cord.....isolated
Pyramid.....isolated
Medial Lemniscus.....isolated
Funiculus Cuneatus.....isolated
Decussation of Pyramid.....repeated

Basal Ganglia

Head of Caudate Nucleus.....repeated
Globus Pallidus.....repeated
Thalamus—Lateral and Medial Nuclei
and Massa Intermedia (chiefly first).repeated
Ansa Lenticularis.....isolated

Hypothalamus

Lateral to Nucleus Paraventricularis...isolated
Substantia Reticularis Hypothalamus...isolated

Ventricular Walls

Lateral Ventricles, Subependymal,
Frontal Hornsrepeated
Third Ventricle, Subependymal,
Lateral Wallsrepeated
Fourth Ventricle, Subependymal, Level
Nuclei VI cranial nerve.repeated
Level Dorsal Nucleus X Cranial nerve..isolated

Cerebrum

Olfactory Trigone.....isolated
Gyrus Subcallosus.....isolated
Genu of Corpus Callosum.....isolated
Internal Capsule, Anterior Arm.....isolated
External Capsule, Anteriorly.....isolated

Leptomeninges

Pia about Island of Reil.....isolated
Pia—Medial Longitudinal Fissure,
Cerebrumisolated
Pia—Dorsal Surface, Medulla.....isolated

No recent petechial hemorrhages were found and no perivascular collections of hemosiderin-laden phagocytes.



Fig. 1. Perivascular Infiltration of Lymphocytes, Plasma Cells and Monocytes. Medulla—Adjacent to Inferior Olive. Hematoxylin-Eosin Stain. X 170.

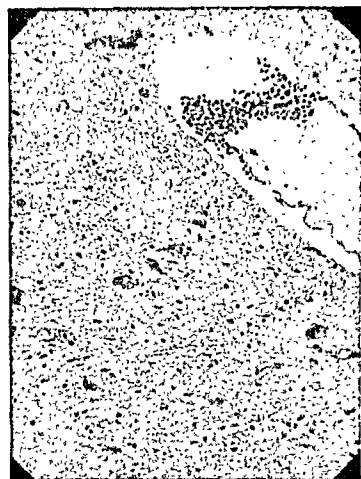


Fig. 2. Perivascular Infiltration—Substantia Nigra. Hematoxylin-Eosin Stain. X 170.



Fig. 3 Perivascular Infiltration—Substantia Nigra Hematoxylin-Eosin Stain X 170

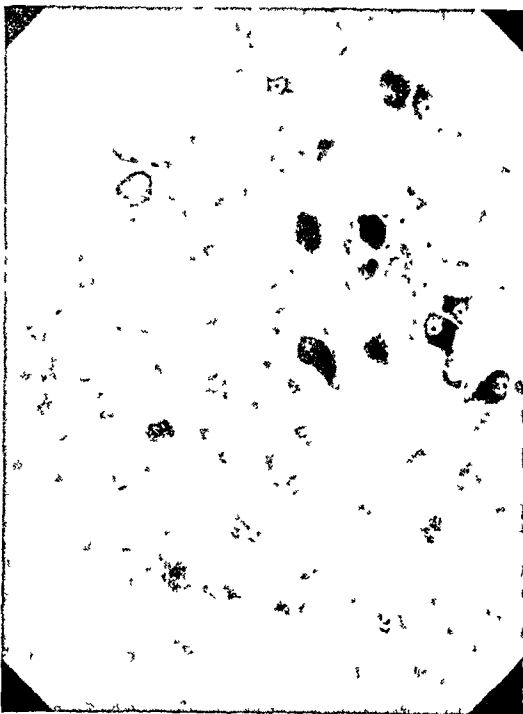


Fig. 4. Loss of Pigment and Chromatolysis in Ganglion Cells of Locus Caeruleus. Nissl Stain. X 170.

The ganglion cell changes observed in the Nissl stains were never very striking. Ghost and sclerotic cells were occasionally seen in the nuclei of the brain stem, but were not concentrated in any particular groups. Shrunken ganglion cells with little Nissl substance and pyknotic nuclei were also seen in these locations, but even less frequently. There was little evidence of degeneration in the substantia nigra or in the locus caeruleus. No evidence of abnormal lipid deposition in the neural elements in the brain stem was observed in the stains available. Occasional clusters of ganglion cells in the stem nuclei showed axonal chromatolysis. This was striking in a group of depigmented cells in the locus caeruleus (see Fig. 4).

In the basal ganglia ghost and shrunken nerve cells were moderately frequent in the globus pallidus and occasional among the large cells of the caudate nucleus and putamen. In the hypothalamus and cerebral cortex there were no nerve cell changes sufficiently notable to record.

There was a considerable amount of calcium-iron deposition in the globus pallidus, chiefly in its posterior two-thirds. Spherical, small, deeply staining masses of calcium and iron varying in size from fine granules to mulberry-like conglomerate masses 20-40 micra in diameter were found in perivascular spaces and in the walls, chiefly the adventitiae of blood vessels. They impregnated the walls of a great many capillaries and were occasionally present in perineuronal spaces.

Discussion

Oppenheim¹⁵ in describing myasthenia gravis referred to a group of borderline cases in which the syndrome was somewhat atypical. The present case undoubtedly belongs in that category and as has been pointed out there is evidence to suspect that it is a myasthenic syndrome following epidemic encephalitis. The patient had a mild attack of influenza in 1918 a few months before the onset of her symptoms. The eye signs, the protrusion and retraction movements of the tongue and the diurnal somnolence strengthen the likelihood of this diagnosis. As Grossman,⁸ Sarbo,¹⁸ Paulian,¹⁰ Wimmer-Vedmond,²³ and Guillain-Alajouanine-Kalt⁹ have pointed out the

myasthenic syndrome may be associated with epidemic encephalitis.

Many of the early investigators sought for the lesions of myasthenia gravis in the central nervous system with doubtful results. Oppenheim¹⁸ considered it a form of bulbar paralysis without anatomical findings. With Weigert's description (1901) of a case²¹ in which he found a thymoma and lymphomatous nodules in the muscles at autopsy, attention was focused on the thymus and the striated muscles. Persistence and hyperplasia of the thymus and neoplastic changes were described in cases of myasthenia frequently thereafter, but were certainly not constant, having been absent in Hutter's case and others. In our own instance there was some evidence of mild thymic hyperplasia, but it was insufficient in extent or intensity for any significance to be attached to it. Buzzard⁴ (1905) reported lymphorrhages in the muscles and this was often substantiated by other investigators. There are, however, a long series of cases in the literature such as those of Herzog and McAlpine,¹² in which no muscle changes were present. This was also true in the present instance. Querido¹⁷ found perivascular foci of lymphocytes, plasma cells and fibroblastic hyperplasia in striated muscles, liver, lungs, and kidneys. He suggested that the condition could be defined as a perivascularitis chronica proliferans and felt that the previously described findings in the muscles were the same thing. His hypothesis has received no further confirmation and his theory is unconvincing. The organs of internal secretion have been suspected from time to time of being the site of the essential pathology of myasthenia. The findings in these organs have not been convincing. The thyroid, parathyroids, and adrenals have been implicated, but the negative reports have seemed more impressive than the apparently positive ones. The minor focal cortical atrophy in one adrenal in our case is almost certainly unrelated to the myasthenic syndrome.

Attention has again been turned more recently to the nervous system in an attempt to discover the etiology of the disease. Barrada and Mott¹ (1923) reported a case in which they described generalized diminution of basophil sub-

stance throughout the central nervous system. It was most marked in the thalamus in which ganglion cell degeneration and neuronophagia were noted. Similar changes were less marked in the third and fourth cranial nerve nuclei. The other brain stem nuclei as well as the anterior horn cells of the spinal cord exhibited very little basophil changes, although here and there some cells were found with marked chromatolysis, eccentric nuclei, swollen and vacuolated cytoplasm and containing much lipid material. There was general congestion, but no hemorrhages or perivascular infiltration.

Biernmann and Scharapow³ described a case with degenerative changes in the ganglion cells of the sympathetic ganglia as well as in the adrenals. Van Bogaert²⁰ reported a rather atypical case which was considered by McAlpine,¹² however, to be very similar to his own case of myasthenia. There was subependymal perivascular infiltration in the floor of the fourth ventricle and to a slight degree in the midbrain. Chromatolysis was observed in the twelfth cranial nerve nucleus, Roller's nucleus, ventral nucleus of the seventh and dorsal nucleus of the tenth cranial nerves. The cord showed marked perivascular infiltration of the white matter by lymphocytes and plasma cells. The anterior horn cells were decreased in number and some exhibited chromatolysis.

McAlpine found a great deal of perivascular round cell infiltration chiefly in the white matter of the spinal cord in his case. The motor cells were normal throughout the cord. There was mucocytic degeneration throughout the central nervous system which was compared with a similar condition described in chronic epidemic encephalitis. The thymus was markedly hypertrophied.

Kononowa¹¹ described diffuse inflammatory and degenerative lesions giving the picture of an encephalomyeloneuritis. The peripheral nerves were partially degenerated.

Westphal and Meyer²² reported occasional mild perivascular lymphocytic and plasma cell infiltration in the cerebral pia and white matter, and in the brain stem. These were most marked in the hippocampal gyri. Rarely, focal areas of ganglion cell loss were found in the

cerebral cortex. Slight recent and old hemorrhages were also encountered in small numbers throughout the brain. The root of one of the fourth cranial nerves was infiltrated like the brain stem and in addition its septa contained numerous mast cells. The spinal cord and sympathetic nervous system was negative, as were the muscles. Westphal and Meyer were inclined to discount completely the significance of their findings. This point will be discussed further below.

Zajewloschin²⁴ described widespread inflammation of the nervous system most marked in the hypothalamus. This consisted of perivascular and diffuse lymphocytic infiltration and was accompanied by degenerative phenomena in the ganglion cells. The process was most intense in the cervical sympathetic ganglia. There was a thymic tumor and lymphoid collections in the muscles.

Tronconi¹⁰ found changes in the ganglion and glia cells of the nuclei of the vegetative and extrapyramidal centers, but denied their significance because of their presence in control material.

There were two cases that came to autopsy that were considered to be instances of the myasthenic syndrome following epidemic encephalitis. One was Grossman's⁸ second case. In this, perivascular lymphocytic infiltration and small perivascular hemorrhages were found in the brain stem, and were most marked in the midbrain. There was also evidence of a subacute process in the thickening of the blood vessel walls as well as in multiple areas of gliosis. Grönberg and Stenström⁷ reported the other case. In it they found perivascular round cell infiltration in the medulla with chromatolysis of the ganglion cells in the ninth nerve nuclei. There were perivascular hemorrhages and rare perivascular infiltration in the mammillary bodies. The spinal cord was normal.

In reviewing the pathological data relating to myasthenia gravis it becomes obvious that, as yet, there is no outstanding, constantly recurring constellation of lesions. The findings in the thymus and muscles are perhaps the most frequent, but they are often absent and their significance is obscure. It is clear, also, that recent studies of the nervous system in cases of myasthenia have given us no

definite clue as to the underlying pathology in the disease. As Westphal and Meyer pointed out, too much stress has been placed on minor ganglion cell changes in the brain stem. They point to the work of Gagel and Bodechtel⁶ who demonstrated similar changes in comparatively normal brain stems.

The perivascular round cell infiltration and small recent and old hemorrhages in their own and other cases were accepted by Westphal and Meyer²² as real lesions. The sparsity and distribution of these lesions led them to doubt their significance in causing the symptoms. It seemed more plausible to them that during periods of choking and dyspnoea, so common terminally in this disease, vascular spasm or faulty oxygenation mediated the perivascular changes. Even this cautious interpretation might be challenged for it is well-known that occasional perivascular lymphocytic infiltration may be encountered in so-called normal brains. In most of the cases cited in this report, including our own, perivascular infiltration although present has been relatively infrequent. Where diffuse lymphocytic infiltration is spoken of there may be some doubt as to the accuracy of the observation.

The variation in the distribution of the inflammatory lesions also induces doubt as to their relationship to the production of the symptoms. They include infiltration of the spinal cord alone or involvement of the brain stem, basal ganglia or hypothalamus with different zones of maximum involvement in these locations in each case. In our instance there is no possibility of correlation between the symptoms and signs and the inflammatory lesions. Nuclei and tracts in which one would expect to find changes are spared and others affected. We feel, therefore, with Westphal and Meyer that no typical pathological picture in the central nervous system has been established for myasthenia to date.

The relationship of the myasthenic syndrome to epidemic encephalitis, although probable, has no incontrovertible clinical evidence in its favor. McAlpine in reviewing the cases bearing on this point divides them roughly into two groups "(1) those in which the clinical picture of myasthenia is well represented, but in which the occurrence of a previous attack

of epidemic encephalitis is problematical; (2) those in which there is little doubt that the patient had an attack of epidemic encephalitis, but in which the condition that followed lacked several of the true myasthenic phenomena." He feels that the cases of Wimmer-Vedmond and Paulian fall into the first group and those of Sarbo, Grossman and Guillain, et al., into the second. As stated above there were clinical data to suggest that epidemic encephalitis was present in our case, but this was certainly not established beyond any possibility of doubt.

Pathological proof of the concurrence of myasthenia and epidemic encephalitis is lacking as yet. Grossman's second case in which there was an autopsy, developed brain stem symptoms late. The resemblance to myasthenia was slight. In Gronberg and Stenstrom's case the perivascular infiltration was practically confined to the medulla and some question might be raised as to the pathological diagnosis. McAlpine considered the possibility of epidemic encephalitis in his case, he pointed out the frequency of mucocytic degeneration, such as was present in his instance in that disease. The fact that inflammatory lesions were present chiefly in the spinal cord and were lacking in the other areas usually affected in epidemic encephalitis are arguments against this diagnosis. In the present case many of the zones ordinarily involved show changes. They are slight, however. It might be argued that after an illness last-

ing eleven years the inflammatory changes would be minimal. One would expect, however, to find more definite evidence of degeneration and gliosis.

The calcium-iron deposits in the globus pallidus in the present case must also be interpreted cautiously. As Jakob¹⁰ and others have pointed out, they occur in so-called normal brains and only when present in large amounts can they be considered pathological. Such mineral deposits in this region are not uncommon in chronic epidemic encephalitis, however. We feel that they are sufficiently marked in this case to be considered pathological. They are coupled with cell changes and occasional perivascular infiltration.

Conclusions

The changes found in the central nervous system in our case, on the whole, impress us as pathological but quite moderate. Their relationship to the myasthenic syndrome is far from certain. In view of the clinical facts that point to epidemic encephalitis, the possibility that the anatomic findings are an expression of that disease cannot be ruled out. It is obvious, however, that this cannot be considered an anatomically proved case of myasthenic syndrome following epidemic encephalitis.

We join Westphal and Meyer in urging the greatest caution in the estimation of the significance of changes in the nervous system in cases of myasthenia gravis.

140 EAST 54TH STREET

References

- 1 Barrada, Y. A., and Mott, F. W. Pathological Findings in the Central Nervous System of a Case of Myasthenia Gravis, *Brain*, 46: 237, 1923.
- 2 Bell, E. T. Tumors of Thymus in Myasthenia Gravis, *J. Nerv. & Ment. Diseases*, 45: 130, 1917.
- 3 Bierman and Scharapow. Myasthenia Pathologic Anatomy, *Ztschr. f. d. Ges. Neurol. u. Psychiat.*, 118: 115, 1928.
- 4 Buzzard. The Clinical History and Post mortem Examination of Five Cases of Myasthenia Gravis, *Brain*, 28: 438, 1905.
- 5 Chvostek, F. Myasthenia Gravis u. Epithelkörperchen. *Wien. klin. Wchschr.*, 21: 37, 1908.
- 6 Gagel, O. and Bodechtel, G. Pseudo pathological Findings in Normal Brain Stems, *Zentralbl. f. Anat. u. Entwicklungsgeschichte*, vol. 9, 1929.
- 7 Gronberg, A., and Stenstrom, B. Myasthenic Form of Encephalitis. Clinical and Anatomical Pathologic Study, *Acta Med. Scandinav.*, 70: 179, 1929.
- 8 Grossman, M. Epidemic Encephalitis Simulating Myasthenia Gravis, *J. Nervous and Ment. Diseases*, 55: 32, 1929.
- 9 Guillain, G. Alajouanne, Th., and Kalt, M. The Myasthenic Syndrome in Epidemic Encephalitis, *Rev. Neurol.*, 33: 368, 1926.
- 10 Jakob, A. Anatomie u. Histologie des Grosshirns, *Leipzig u. Wien. Deuticke*, vol. 1, 1929.
- 11 Kononowa. Pathology and Pathogenesis of Myasthenia, *Ref. in Neurol. Zentralbl.*, vol. 55, 1930.
- 12 McAlpine, D. A Form of Myasthenia Gravis with Changes in the Central Nervous System, *Brain*, 52: 6, 1929.
- 13 McAlpine, D. Myasthenia Gravis. Treatment with Ephedrine, *Lancet*, 1: 180, 1934.
- 14 McKendree, C. A. Myasthenic Syndrome. Presentation of Patient and Case Analysis,

Bulletin N. Y. Acad. Med., 3:642, 1927.

15. Oppenheim, H.: *Die Myasthenische Paralyse*, Berlin, S. Karger, 1901.

16. Paulian, E. C.: Myasthenia in Relation to Epidemic Encephalitis, *Bull. et Mém., Soc. Méd. d'Hôp. de Paris*, 47:1523, 1923.

17. Querido, A.: On Myasthenia Gravis, *J. Nerv. and Ment. Diseases*, 69:522, 1929.

18. Sarbo, A.: Epidemic Encephalitis. Studies of the Epidemic of 1920, *Ztschr. f. d. ges. Neur. u. Psychiat.*, 27:509, 1921.

19. Tronconi, V.: Myasthenia Gravis. Path. Anat. of Central Nervous System, *Arb. a. d. Neurol. Inst. a. d. Wien Univ.*, 35:93, 1933.

20. Van Bogaert, L.: A Study of Labio-

Glosso-Laryngeal Paralysis, with Subacute Course, *Rev. Neuro.*, 35:69, 1928.

21. Weigert, C.: P-... Beitrag zur Erb'schen... Gravis), *Neurol. Zentralbl.*, 20:597, 1901.

22. Westphal, A., and Meyer, A.: Path. Anatomy of Myasthenia Gravis Pseudoparalytica, *Deutsch. Ztschr. f. Nervenhe.*, p. 117-119, 737-748, 1931.

23. Wimmer, A., and Vedmond, H.: The Myasthenic Syndrome in Epidemic Encephalitis, *Rev. Neurol.*, 33:368, 1926.

24. Zajewloschin, M. N.: Myasthenia Gravis. Pathologic Anatomy. Case. *Ztschr. f. d. Ges. Neurol. u. Psychiat.*, 148:28, 1933.

CASE REPORT

DISSECTING ANEURYSM OF THE AORTA

Diagnosis and Operative Relief of Acute Arterial Obstruction Due to This Cause

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According to the recent reports of Weiss¹ and of White, Badger and Castleman,² the frequency of dissecting aneurysm of the aorta is about 1 in 350 necropsies of adults. In the course of any general medical or surgical experience, the condition may therefore be expected to present itself at some time. Yet, of the ten cases reported by Weiss, only one had been correctly diagnosed antemortem and, of eighteen dissecting aneurysms found in 7000 necropsies at the Massachusetts General Hospital, none had been identified before death.² Shennan³ has analyzed 300 cases reported in the literature. He personally saw at autopsy sixteen dissecting aneurysms, none of them recognized before death. Kellogg and Heald⁴ made the correct diagnosis during life and found reports of thirteen other such cases. To these we add one in which surgery relieved arterial obstruction of an extremity.

Report of Case

At about 9:30 p. m., April 14th, 1935, J. R., a 43 year old negro laborer whose previous history was negative except for nocturia 10x of a month's duration, developed sharp epigastric pain. One of us (D.G.) saw him about an hour after on-

set of his symptoms. The pain was then excruciating in severity. It had traveled downward and to the right thigh. He complained of coldness and diminution of power in the extremity. These complaints were confirmed on examination. There was blanching of the nail beds of the right toes. No pulsation could be felt in the dorsalis pedis, posterior tibial, or popliteal arteries. A weak impulse was palpable in the right femoral artery. There was no oscillation of the mercury column when a sphygmomanometer cuff was applied to the right calf. On the left pulsation was forceful throughout. Pulsation of the aorta was felt through the abdominal wall.

In general examination the heart was found enlarged to the left, reaching nearly to the anterior axillary line. Heart sounds were loud and regular, rate 90. There was a harsh systolic murmur, most intense in the aortic area. The blood pressure was 280/150. Peripheral vessels and those of the retina showed evidence of this high tension. Temperature was 99°F. A urine specimen had a specific gravity of 1.020, with albumin 1 plus, sugar none, and a few w.b.c., r.b.c. and finely granular casts.

A diagnosis of aneurysm dissecting the

aorta and occluding the right external iliac and femoral arteries was made. It was felt that in spite of the marked hypertension and cardiovascular and renal damage, surgery might prevent an otherwise inevitable gangrene of the extremity.

Operation

Two and a half hours after the onset of his symptoms the right femoral artery was exposed under local anesthesia (by JWB and RD). At the beginning of the operation a faint pulsation could be felt in the femoral artery. On exposing the vessel no pulsation was visible or palpable. Its wall was intact, and no mass could be felt in the lumen. Aspiration with a fine needle revealed bright blood under markedly diminished pressure. The wound was closed and under nitrous-oxide oxygen and ether anesthesia the abdomen was opened. The right external iliac artery when isolated three inches above Poupart's ligament was found to have an infiltration of dark blood in its lateral third, extending as far as could be seen in both directions. An impact was transmitted along the artery from above with each heart beat, but there was no expansible pulsation in any part of the vessel. Rubber prided clamps were placed on the artery above and below to prevent any influx of blood. Then a longitudinal one inch incision was made into the anterior surface, which appeared unaffected by the hemorrhagic extravasation. Upon entering the vessel an atheromatous mass was encountered completely plugging the lumen which had been narrowed by the dissecting hemorrhage. The intima and media opposite the atheroma were incised from within the vessel. A small curved Kelly clamp was inserted through this incision into a space between the media and adventitia. From this came a steady flow of dark unclotted blood. With the escape of this blood the obstruction was relieved, and when the proximal clamp was momentarily released, there occurred a spurt of bright arterial blood from the incision. The incision into the vessel was closed with interrupted suture of greased silk. When the clamps were removed an expansile pulsation was visible throughout the external iliac artery.

Postoperative Course

On his return from the operating room pulsation was felt in the right dorsalis pedis artery and the limb was warm. After recovering consciousness he developed a cough productive of bloody purulent sputum. X-ray taken 36 hours after admission showed a patchy pneumonia involving the right lower lobe. The urea nitrogen reached 66.7 mg and the creatinine 4 mgs per 100 cc on the fifth day after operation. The temperature rose to 103.5° and he expired on the sixth day. Circulation in the right lower extremity remained unimpaired until his death. The blood Wasserman was reported negative. No near relative was available to give the necessary permission for an autopsy.

Discussion

Dissecting aneurysm of the aorta is a hemorrhagic extravasation which begins most often in the ascending portion of the arch of the aorta and spreads through the media, usually adjacent to the adventitia. In its course the extravasation may cause compression of any of the branches of the aorta, including the coronary arteries. In the majority of cases severe hypertension with systolic pressure of over 200 has been pre-existent. Dissecting aneurysm is not the common terminus for severe hypertension, suggesting that the aorta in these cases must be more fragile than usual. Obliterating sclerosis of the vasa vasorum with consequent degeneration of the media has been frequently described.¹ The findings are those of malignant hypertension, with the vasa vasorum the site of the most advanced arteriolar lesions. Syphilis is rarely a cause of this condition because the layers of the luetic aneurysm fuse, and rupture is usually not accompanied by splitting. Likewise accidental trauma may cause rupture but rarely dissection. Status lymphaticus and coarctation of the aorta have been described as causing rupture with a certain amount of dissection.

According to Kellogg and Heald, sixty-five per cent of cases of dissecting aneurysm die immediately from complete rupture of the aneurysm. Rupture is most frequently into the pericardium, pleural cavities or mediastinum. Another fifteen per cent die in a few days (the patient

they reported died of gangrene of the lower extremities). The remainder have a good chance of recovery but may re-rupture.

Healing occurs by (a) absorption of blood and eventual fusion together of the layers of the media or (b) by establishment of a new arterial channel along the course of the dissection, lined by endothelium and communicating above and below with the lumen of the aorta or one of its branches.³ The operative procedure used in the case which is being reported would facilitate healing by either method as well as relieve the immediate obstruction.

The diagnosis of dissecting aneurysm⁶ should be *suspected* when an individual,

usually (75%) male, usually with history or evidence of severe hypertension, suddenly develops pain at the level of the precordium without evidence of acute myocardial damage by E K G, fall in blood pressure or marked rise in pulse. Often the pain in these cases is more severe over the thoracic spine or in the epigastrium than under the sternum. The diagnosis should be made when following the above, signs of acute arterial blockage or internal hemorrhage develop. Valvular heart disease, auricular fibrillation or other source of embolism can ordinarily be ruled out. Infection, cachexia or mechanical pressure causing thrombosis are also absent in dissecting aneurysm.

References

1. Weiss, S.: The Clinical Course of Spontaneous Dissecting Aneurysm of the Aorta, *Med. Clin. N.A.*, 18:1117, 1935.
2. White, P. D., Badger, T. L. and Castleman, B.: Dissecting Aortic Aneurysm Wrongly Diagnosed Coronary Thrombosis, *Jour. A.M.A.*, 103:1135, 1934.
3. Shennan, T.: Dissecting Aneurysms, *H.M. Sta. Off. (London) Privy Council Med. Res. Council*, 1934, No. 193.
4. Kellogg, F., and Heald, A. H.: Dissecting Aneurysm of Aorta: Report of Case Diagnosed During Life, *Jour. A.M.A.*, 100:1157, 1933.
5. Whitman, R. G., and Stein, H. B.: A Contribution to the Pathogenesis of Dissecting Aneurysms of the Aorta, *J.M. Research*, 44:579, 1924.
6. Gager, L. T.: The Symptoms of Dissecting Aneurysm of the Aorta. *Am. Int. Med.*, 2:658, 1929.

Pannhurst, R.: Symptomatology und Diagnose der Aortenruptur und des Aneurysma dissecans, *Deutsches Archiv. f. klin. Med.*, 175:115, 1933.

AROUND THE STATE

"FORTY-THREE out of every 100,000 persons in Brooklyn died of pulmonary tuberculosis in 1934 as compared with 173 out of every 100,000 20 years ago," Dr. Thomas A. McGoldrick told 150 members of the Medical Society of the County of Kings at the Society Center, on Nov. 1.

THE MONTHLY MEETING of the Woman's Auxiliary to the Medical Society of the County of Kings was held at the society building, on Nov. 12.

Dr. W. W. Bauer of Chicago, director of the Bureau of Health and Public Instruction of the American Medical Association, spoke on "Centuries of Progress in Medicine." Following the meeting there was a tea under the supervision of Mrs. William Lippold, chairman of hospitality.

THE WESTCHESTER COUNTY Medical Society has adopted resolutions recommending that maternal health centers being established in the county "should be brought under the responsibility and control of the

medical profession, preferably through the recognized community hospitals in their Departments of Gynecology."

THE CAMPAIGN against pneumonia was discussed at the meeting of the Cortland County Medical Society at the County Hospital in Cortland on October 18. Speakers were Dr. Charles D. Post, of Syracuse University, and Dr. M. R. French, county health officer. Twenty-five physicians were present.

"EMPYEMA" was the subject of Dr. P. N. Coryllos, of the Cornell Medical School, at the meeting of the Broome County Medical Society at the Binghamton Club on Nov. 5.

DR. HUGH YOUNG of Baltimore, an authority on cancer of the prostate and bladder, addressed the Glens Falls Academy of Medicine on Oct. 25, urging approximately 100 physicians and surgeons of Glens Falls and vicinity to stimulate yearly examinations to help curb the disease.

THE LIFE-SPAN OF THE DIABETIC PATIENT

Report of 1,500 Cases, 13 years after the Discovery of Insulin

JOSEPH HAJEK, M.D., *New York City*

In 1922 Banting and Best introduced insulin in the treatment of diabetes mellitus. In that year the supply of insulin was limited but beginning with 1923 it became sufficient, so that up through 1934 there has elapsed a period of 12 years during which insulin has been universally in use. Within these 12 years we have treated 1,387 patients in the wards of St. Luke's Hospital. Prior to the discovery of insulin, during the period 1920-21, we had the opportunity of observing 113 cases, so that our entire series comprises 1,500 patients. This group is analysed with reference to general mortality, deaths due to coma, surgery, arteriosclerosis, infection, neoplasm, age, sex, and the average duration of life.

These 1,500 cases therefore represent the pre-insulin period 1920-21 and the post-insulin period 1923-1934, the year 1922 being intentionally omitted because the supply of insulin was small. Our pre-insulin series is composed of 113 cases and the post-insulin period is represented by 1,387 cases. For the sake of comparison, the post-insulin period is divided into the early post-insulin period 1923-1930 comprising 872 cases, and the late post-insulin period 1931-1934, when 515 patients were seen. Thus we have for comparative study three groups of patients as follows: Group I, pre-insulin period, 113 cases; Group II, early post-insulin period, 872 cases; and Group III, late post-insulin period, 515 patients. These three groups are shown as follows:

Group	Period	Number of cases
Group I	Pre-insulin years 1920-21.....	113
Group II	Early post-insulin years 1923-30....	872
Group III	Late post-insulin years 1931-34....	515
Total.....		1,500

General mortality. Since the introduction of insulin the general mortality has been greatly reduced. This reduction was not so apparent during the early post-insulin period, but it has been marked in the late post-insulin years. It was

shown in a previous paper* that during the early post-insulin period the decrease in general mortality at St. Luke's Hospital was entirely accounted for by the diminution in deaths due to coma. The late post-insulin period indicates a further striking decrease in general mortality and this is due to the elimination of deaths from coma, and a diminution in mortality from infection. The general mortality is illustrated as follows:

Group	Period	No. of cases	No. of deaths	% mortality
Group I	Pre-insulin period 1920-21	113	22	19%
Group II	Early post-insulin period 1923-30	872	101	11.6%
Group III	Late post-insulin period 1931-34	515	38	7.4%

Mortality due to coma. During the early post-insulin period (1923-30) coma was seen four times less frequently than in the pre-Banting era (1920-21). In the late post-insulin years (1931-34) it was eight times less frequent. The reason for this is that we had learned how to treat coma in the first instance, and made an attempt at its prevention in the second. As a result, the mortality from this cause decreased from 54 per cent in the pre-insulin years to 5 per cent during the early post-insulin period. There were no deaths in the late post-insulin years. This striking diminution in mortality is entirely accounted for by the use of insulin, the widespread knowledge of the disease, education of the patient, and the early diagnosis and treatment of ketosis. Since our diabetic patients are saved from coma, it would appear that their life-span has been increased. The average age at death in the pre-insulin years was 55 years and remained the same during the early post-insulin period. It is 59.8 years during the late post-insulin years, an increase of

* Hajek, Joseph: N. Y. STATE JOURNAL OF MEDICINE, 33:802, 1933.

4.8 years. The mortality due to coma is illustrated as follows:

Group	Period	No. of cases	No. of deaths	% 1 coma
Group I	Pre-insulin period 1920-21	113	22	54%
Group II	Early post-insulin period 1923-30	872	101	5%
Group III	Late post-insulin period 1931-34	515	38	0%

Surgical Mortality. Before the discovery of insulin the surgical diabetic patient was as hopeless as the medical patient was in coma, and the mortality was correspondingly high. Since Banting's great discovery the surgical patient has become a good risk. These patients have been taught personal hygiene, care of their extremities, and the value of early treatment. During the pre-insulin period only 1 out of every 10 diabetics was operated on, and even then the mortality was high; in the early post-insulin period, however, 3 out of every 10, and in the late post-insulin period 4 out of 10 were operated on, and there was marked reduction in deaths. The decrease in surgical mortality at St. Luke's Hospital is shown as follows:

Group	Period	No. of cases	% mortality
Group I	Pre-insulin period 1920-21	13	33%
Group II	Early post-insulin period 1923-30	257	16.3%
Group III	Late post-insulin period 1931-34	195	8.7%

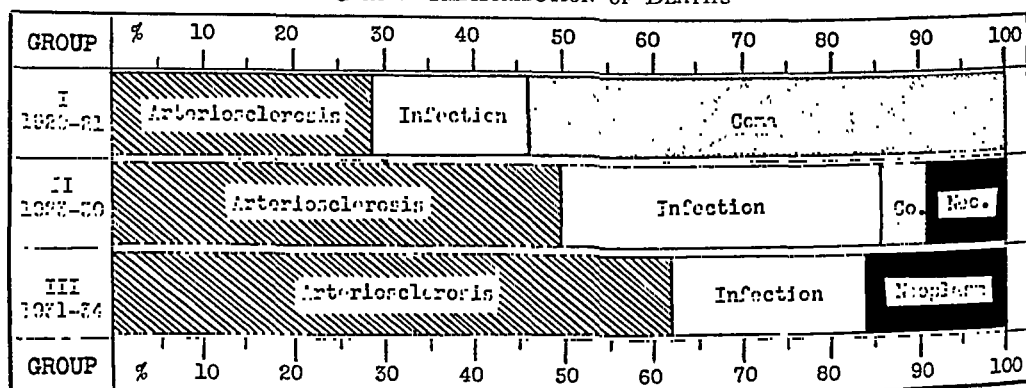
Mortality due to arteriosclerosis. It has been shown that mortality due to coma has greatly decreased, and indeed during the late post-insulin years we had no deaths from this cause at St. Luke's Hospital. What happens to the patients who are saved from coma? To be sure, they go on living, although many develop arteriosclerosis or die of infection or neo-

plasm. But lately they have been taught how to avoid infection; therefore many patients of the type which during the early post-insulin period died of infection are now spared, but become stricken either with arteriosclerosis or neoplasm. Thus the three principal causes of death of the diabetic in the order of their importance are arteriosclerosis, infection, and neoplasm. Since our diabetic patients can avoid coma, thanks to Banting, and more and more of them prevent infection, it would seem that they have increased their life-span. The average age of the diabetic patient at death, during the late post-insulin period, was 59.8 years, or 4.8 years more than during the pre-insulin period and the early post-insulin years. Every diabetic patient saved from coma is a potential case of arteriosclerosis, but to develop it he has to live longer than he did before the discovery of insulin. This accounts for the great increase in mortality due to arteriosclerosis and for the increase in his life-span. The great increase in mortality from arteriosclerosis is illustrated as follows:

Group	Period	No. of cases	No. died	% arteriosclerosis
Group I	Pre-insulin years 1920-21	113	22	28%
Group II	Early post-insulin years 1923-30	872	101	50%
Group III	Late post-insulin years 1931-34	515	38	63%

Mortality due to infection. Mortality from infection was lowest during the pre-insulin period but showed a marked rise during the early post-insulin period. In the late post-insulin period the death rate due to infection diminished, and this decrease is largely due to the education of the patients in their personal hygiene, and

GRAPH—REDISTRIBUTION OF DEATHS



the use of insulin. The mortality from infection is shown as follows:

Group	Period	No. of cases	No. died	% infection
Group I	Pre-insulin years 1920-21	113	22	18%
Group II	Early post-insulin years 1923-30	872	101	36%
Group III	Late post-insulin years 1931-34	515	38	21%

Mortality due to neoplasm. Since our diabetic patients live longer, more of them die of neoplasm, and this increase in mortality is shown as follows:

Group	Period	No. of cases	No. died	% Neoplasm
Group I	Pre-insulin years 1920-21	113	22	0%
Group II	Early post-insulin years 1923-30	872	101	9%
Group III	Late post-insulin years 1931-34	515	38	16%

To illustrate the striking redistribution of deaths due to arteriosclerosis, infection, coma, and neoplasm during the past 12 years we have prepared the accompanying graph.

Age. The redistribution of mortality in diabetes is due to several factors: (1) introduction of insulin which resulted in the saving of thousands of diabetic patients, (2) widespread knowledge of the disease by the profession and the laity, (3) improved methods in laboratory diagnosis, (4) education of the patient, (5) cooperation of the hospital with the diabetic clinic, (6) early diagnosis of ketosis, (7) personal hygiene, and (8) complete follow-up. The combination of these factors resulted in marked diminution in general mortality, deaths due to coma, and to infection, in consequence, the average age at death has risen from 55 in the pre-insulin and early post-insulin periods to 59.8 during the late post-insulin period. This is illustrated as follows:

Group	Period	No. of cases	No. died	Average age at death
Group I	Pre-insulin years 1920-21	113	22	55 years
Group II	Early post-insulin years 1923-30	872	101	55 years
Group III	Late post-insulin years 1931-34	515	38	59.8 years

Sex. The sex ratio has undergone a rapid change. In 1916 Osler gave the ratio of male to female as 3.2. Joslin in 1931 states that the proportions of males had decreased to 44 per cent in contrast to 47 per cent in 1921 and 55 per cent a decade before.

In our series at St. Luke's Hospital the proportion of males has increased from 44 per cent in 1920 to 49 per cent during the early post-insulin period and has diminished to 40 per cent in the late post-insulin years, shown in the following:

Group	Period	No. of cases	% of males
Group I	Pre-insulin years 1920-21	113	44
Group II	Early post-insulin years 1923-30	872	49
Group III	Late post-insulin years 1931-34	515	40

Summary

1,500 cases of diabetes mellitus are presented with reference to general mortality, deaths due to coma, surgery, arteriosclerosis, infection, neoplasm, age, sex, and the average age at death.

1. The general mortality has decreased from 19 per cent in the pre-insulin period to 11.6 per cent and 7.4 per cent during the early and late post-insulin years.

2. Deaths due to coma diminished from 54 per cent during the pre-insulin years 1920-21 to 5 per cent in the early post-insulin years 1923-30. There was no mortality from coma at St. Luke's Hospital in the late post-insulin years 1931-34.

3. Surgical mortality decreased from 33 per cent in group I to 16.3 per cent in group II and 8.7 per cent in group III.

4. There is marked increase in deaths from arteriosclerosis. In group I 28 per cent of the deaths were due to this cause, in group II 50 per cent, and in group III 63 per cent.

5. Mortality due to infection has decreased from 36 per cent in the early post-insulin period to 21 per cent in the late post-insulin period.

6. Neoplasm as a cause of death is on the increase during the late post-insulin period. While there was no mortality from neoplasm during the pre-insulin period it rose to 16 per cent in the late post-insulin period.

7. Forty per cent of the diabetics were males in group III, forty-nine per cent in group II, and forty-four per cent in group I.

8. The average life span of the diabetic at St. Luke's Hospital has increased from 55 to 59.8 years.

9. Thirteen years after Banting's discovery of insulin the adult diabetic is able not only to live but also to die like a person without this disease.

555 PARK AVENUE

CHOLECYSTECTOMY IN TYPHOID CARRIERS

Report of Five Cases

EILIF CARL HANSEN, M.D., *New York City*
Assistant Surgeon, New York Post-Graduate Hospital

Typhoid carriers are roughly classified as feces carriers and urine carriers. Urine carriers are rare. The feces carrier is the common variety. Garbat¹ in 1922, as a result of a study of 164 cases of typhoid fever, demonstrated that there are three distinct types of feces carriers according to the nidus of infection: the liver carrier, the gallbladder carrier, and the intestinal carrier. In the first two the bacilli enter the intestine with the bile. In the intestinal type the bile passages are free from infection. The gallbladder carrier is by far the commonest of the three types of feces carriers. Garbat also pointed out that duodenal intubation culture was a more reliable method of determining the bile carrier state than stool culture. He showed that stool culture failed to detect the bacilli in fifteen per cent of carriers.

In 1933 there were 662 carriers on record in New York State.² Of these 340 were in New York City. During the same year thirty-eight new carriers were added to the register. The control of the typhoid carrier, once he has been detected, becomes a serious problem. In addition to his being a constant source of danger to the health of the community, he often becomes a financial burden to the state.

Although as early as 1907 Dehler³ cured the carrier state in one case by cholecystectomy, this method of treatment has not been used extensively, judging from the number of cases reported in the literature. The largest reported series of operations on the gallbladder for cure of the typhoidal carrier state are those of Bergglas⁴ of Germany who reported seventy-four cases in 1929, and Senftner⁵ and Coughlin who collected sixty-eight such cases in upstate New York and reported them in 1933. The Haalands⁶ of Norway reported fourteen cases in 1927, and Whipple⁷ fourteen cases from the Presbyterian Hospital in 1929. In 1933 Bigelow⁸ and Anderson of Boston reported twelve cases.

Our series consists of five cases which came to operation out of a series of fifteen cases investigated from the carrier standpoint in our clinic for the Study of Diseases of the Liver and Biliary Tract. Prior to operation bile and stool cultures were obtained in each case. At operation cultures were made of the fluid contents of the gallbladder and of the wall of the gallbladder. Gallstones and cystic duct lymph nodes were cultured when present. Following operation cultures of bile and stool specimens were made during the patient's stay in the hospital and also after discharge at follow-up visits.

All five cases of our series were known typhoid carriers for periods varying from three months to three years. Bile and stool cultures were positive in each case prior to operation. One patient was operated on three months after typhoid fever for which she had been treated in the medical ward. The remaining four patients were ambulatory carriers registered with the State Department of Health. Three of our patients were males and two females. Two out of the five carriers (40 per cent) denied having had typhoid fever, but in both cases a history of exposure to typhoid fever was obtained. The operation performed in each case was cholecystectomy. At operation gallstones were found in four out of five of the cases. *B. typhosus* was cultured from the fluid contents of the gallbladder and wall of the gallbladder in every case, and from the gallstones, and cystic duct lymph node in two cases.

All five patients recovered, and all were cured of the carrier state, as shown by repeatedly negative bile and stool cultures following discharge from hospital. Bigelow and Anderson also report 100 per cent cures in their series of twelve cases following cholecystectomy. The Haalands report 84.5 per cent cures. They report thirteen cholecystectomies and one cholecystostomy. One of the cholecystectomies

From the Departments of Medicine and Surgery of the New York Post-Graduate Hospital.
Read before the New York Surgical Society at the New York
Post-Graduate Hospital, March 27, 1935

died six days after operation. Of the thirteen survivors, one remains a liver carrier, one a liver and urinary carrier. Whipple reports 83.3 per cent cures. Two of his series of fourteen cases had a cholecystostomy done. One remained a carrier. Of the twelve cholecystectomized patients two died, but both these patients were deeply jaundiced and were operated upon for long standing gallstone disease with cholangitis. "Of the ten surviving cholecystectomies, all were cured of the carrier state except one patient who is still a carrier nine months after his operation. His duodenal bile still shows typhoid bacilli and he has to be classed as a liver carrier."

In the series of Bergglas 73 per cent were reported cured. Senftner and Coughlin in a very careful analysis of their series of sixty-eight operated cases, reported only 68 per cent cures. A recent personal communication⁹ from these authors furnishes a most interesting explanation of how they interpreted their results and emphasizes the importance of careful preoperative, operative, postoperative, and follow-up data in these cases:

Our percentage of cures was based on the forty-one carriers (out of a total series of sixty-eight operated cases) from whom *B. typhosus* was isolated from the bile prior to or from the gallbladder at the time of operation. Of these, seventeen were cured on the basis of three negative duodenal and eight negative fecal specimens.

Inasmuch as we could not be certain of cure in those who did not have duodenal specimens, ten of the forty-one who had four negative fecal specimens but no duodenal specimens were excluded in making the percentages; two who had neither fecal nor duodenal specimens subsequent to operation were naturally excluded. Of the forty-one, four died. The figure 68 per cent was based on the twenty-five carriers from whom sufficient duodenal and fecal specimens were submitted and who recovered from the operation, i.e., seventeen of twenty-five. The figure fifty-nine was based on the same group plus the four who died, i.e., seventeen of twenty-nine.

It is unfortunate that out of the sixty-eight carriers who had had gallbladder surgery at the time our paper was prepared, the work-up was sufficiently complete for a study of the results in less than half.

I wish to cite a typical case. The patient is a groceryman, 42 years of age. He was

referred to us by the New York State Department of Health as a typhoid carrier. He was discovered to be a carrier six weeks prior to admission. He denied having had typhoid fever, but gave a history of exposure to his son, who had had typhoid fever two months previously. His history was otherwise essentially negative except for a previous appendectomy. His physical findings showed nothing abnormal except for the presence of *B. typhosus* in cultures of stool and bile. The cholecystogram revealed a normally functioning gallbladder without evidence of calculi. Cholecystectomy was performed by Dr. Charles Gordon Heyd on January 23 of this year. At operation the gallbladder appeared unusually large, intrahepatic, intensely red with marked telangiectasis over its fundus. There were chronic inflammatory adhesions to the hepatic flexure and gastrohepatic omentum. The gallbladder contained two calculi each about one centimeter in diameter. Cultures of the wall of the gallbladder, of the contents of the gallbladder, and of the gallstone all yielded *B. typhosus*. In this case specific bacteriophage was administered, intravenously the day before operation and the morning of operation. At operation the phage was recovered in fair potency from contents of the gallbladder and in still greater potency from the wall of the gallbladder. Convalescence was uneventful. A culture of the stool fourteen days after operation was negative for *B. typhosus*. At a follow-up visit four weeks after operation, cultures of bile obtained by biliary drainage as well as cultures of the stool were reported negative for this organism. This patient's nidus of infection evidently was his gallbladder, since following its removal he has been cured of his carrier state.*

Similarly, the nidus of infection in the remaining four of our cholecystectomized patients must have been the gallbladder, since in each case removal of the gallbladder was followed by cure of the carrier state.

Seven additional patients who had had cholecystectomy elsewhere for cure of the

* Since the original report was made, this patient has been found to be qualified for release from Department of Health supervision, having had 3 negative duodenal and 8 negative stool cultures.

carrier state were recently studied at our clinic by nonsurgical biliary drainage culture to determine whether the operation resulted in the desired effect. In every case the bile cultures were reported negative for *B. typhosus*.

In conclusion we may state that our findings substantiate those of previous investigators, namely, that cholecystectomy in bile typhoid carriers is curative when the gallbladder is the nidus of in-

fection. We urge that removal of the gallbladder for cure of this unfortunate condition be encouraged.

Acknowledgment

The author wishes to express his thanks to Dr. Charles Gordon Heyd, Dr. Edward W. Peterson, and Dr. R. Franklin Carter who have provided the material used in this paper.

65 EAST 55TH STREET

References

1. Garbat, H. L.: Typhoid carriers and typhoid immunity, *Monograph XVI, Rockefeller Institute*, 1922.
2. Typhoid Carriers: N. Y. State Dept. Health, 54th Annual Report, 1:126, 1933.
3. Dehler: *Munch. Med. Wochenschr.*, Nos. 16 and 43, 1907.
4. Bergglas, Bernard: *Wien, Arch. f. inn. Med.*, 19:285, 1929.
5. Senftner, H. F., and Coughlin, F. E.: Typhoid carriers in New York State with special reference to Gall Bladder operations, *Am. J. Hyg.*, 17:711, 1933.
6. Haaland, Magnus, and Haaland, Margit: Typhoid carriers in Western Norway, *Lancet*, p. 1172, 1927.
7. Whipple, Allen: The surgical treatment of bile typhoid carriers, *Annals of Surgery*, p. 631, 1929.
8. Bigelow, G. H., and Anderson, G. W.: Cure of typhoid carriers, *J.A.M.A.*, 101:348, 1933.
9. Coughlin, F. E., Personal communication.

CASE REPORT

GONOCOCCEMIA WITH COMPLETE RECOVERY

S. H. KRITZALIS, M.D., *New York City*

Infections such as these rarely happen in private practice and of course escape compilation in the statistics either of private hospitals or of other allied institutions. From time to time one reads reports of cases similar to this, with recovery. Their authors state the extreme difficulties of obtaining cultures of the gonococci and many times, therefore, a true clinical diagnosis is a hardship, and everyone can realize this handicap which obscures the prognosis of such severe infections of so-called gonorrheal sepsis or gonococcemia.

The case here described dates back almost two years. The reason for this delay in reporting is one of professional satisfaction, which allowed for a longer period of careful observation to be assured of a complete recovery of the local infections without complications or residual lesions. The author carefully investigated the literature relative to this subject and found an excellent bibliography in the recently reported case of Dr. William Filler.¹

In all the reported gonococcemias it appears that blood transfusions have been

resorted to in only two cases, Garlock² and Rubenstone.³ Garlock used 5 transfusions with no apparent improvement until he resorted to surgical intervention. Rubenstone gave one transfusion of 250 c.c. with a resultant improvement, but did not follow up. The present report will illustrate the value of blood transfusion, in this form of gonorrheal bacteriemia, or gonococcemia.

Report of the Case

The patient, J. C., a single male 38 years old, was seen in consultation December 2, 1931. He has been under treatment for an acute gonorrheal urethritis for a month or so. A few days before consultation he developed a high fever, preceded by chills. He had in addition the symptom complex of muscular pains, general weakness, headache, and slight urethral discharge.

According to the attending physician the patient was on a diet for his gonorrheal infection, and was being treated for a cold. The data of his gonorrheal infection and the recent symptomatology of the supposed cold were noted. Careful examination revealed involvement of four joints: right elbow, left knee, left wrist, and left thumb. There were also a few characteristic red

maculopapular lesions in the skin of the chest, extreme tenderness of the plantar aspects of both feet, and general pallor. The prostate gland was found to be enlarged and the slight urethral discharge was positive for a gram negative intracellular diplococcus. There were no signs of any respiratory system pathology, except for a slight injection of the tonsils and nasopharynx, which certainly could not account for such a severe illness. The spleen was just palpable and examination of the heart elicited no definite signs of any organic lesion other than a slight systolic murmur.

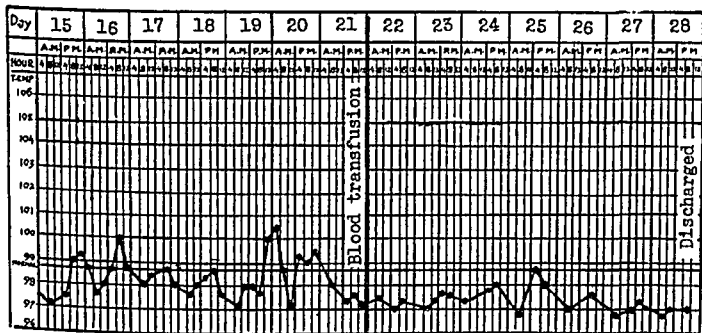
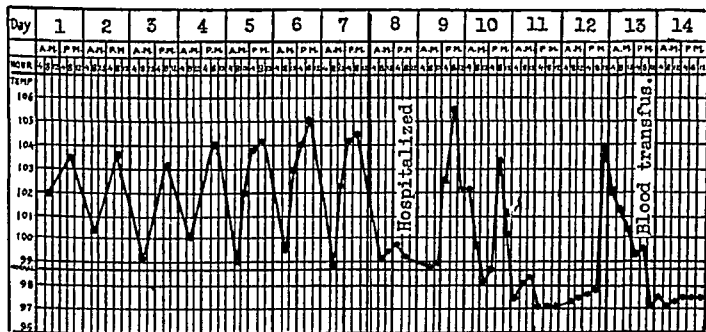
Realizing the serious condition of the patient and suspecting a blood stream infection, the author suggested removal to a hospital for therapy and closer observation.

On the eighth day of his illness he was hospitalized. The following day the fever reached 105.3° F. in the afternoon and the next morning 98° F. The same septic tem-

perature continued daily until the twelfth day. Because protein therapy and salicylates failed, because of fear of losing time even in the attempt to utilize any other palliative treatment, because of the seriousness of the case, and also because the patient was sinking rapidly, the author suggested a consultation with specific reference to a transfusion, with the thought that this would be the only hope of salvation.

On the twelfth day of illness a consultant agreed that the case was one of gonococemia, though not a single positive culture could be obtained, even after repeated trials. The next day at 6 00 p.m. when the temperature was 99.5° F the transfusion of 250 c.c. of whole blood was effected. From that date until the nineteenth day of illness the temperature was almost normal, the patient felt fine, and the only discomfort was the profuse perspiration. The patient slept well during all that period, the appetite

CHART—TEMPERATURES OF THE PATIENT BEFORE AND DURING HOSPITALIZATION,
DATES OF FIRST AND SECOND TRANSFUSION AND DATE OF HIS DISCHARGE.



was improved very much, and the swelling of the said joints had receded.

On the nineteenth day the temperature started to rise again, being 100° F. that afternoon, and on next morning 100.3° F. Fearing a repetition of the previous syndrome, the author thought that another transfusion probably would be salutary. On the twenty-first day a transfusion of 300 c.c. was given and since that time, until the date of discharge, as can be seen in the chart, the temperature, pulse and heart were normal. During his stay in the hospital the laboratory reported repeatedly negative blood cultures, negative Wassermann, 100 pus cells per high power field in repeated urine examinations, negative gonococcus complement fixation test, but positive smears from the slight urethral discharge mentioned above, and the following blood count on the date of admission: hemoglobin 90 per cent, 4,600,000 R.B.C., 20,800, W.B.C. of which latter there were 82 per cent neutrophils, 16 per cent small lymphocytes, and 2 per cent large lymphocytes.

After a week or so a little purulent urethral discharge appeared with a positive smear for gonococci. He received routine office treatment for about 7 weeks. When prostatic smears became repeatedly negative, the patient was discharged, with the suggestion that he appear once every 3 months for observation. After a lapse of time this patient seems to enjoy life in complete and perfect health.

Comment

Many gonorrheal arthritis cases are undoubtedly undiagnosed mild gonococcemias. Some clinicians believe that gonococcemias are much more frequent than have been demonstrated in the laboratories and therefore content that the percentage of recoveries is greater than formerly thought. Many observers recommend surgical intervention or other treatment because the few transfusions recorded in the literature of such cases seemed unsuccessful. However, this case demonstrates clearly the value of blood transfusion in gonococcemias, and the author strongly recommends early use of blood transfusion in all cases in order to shorten the dangerous stage of the infection and to give ample opportunity to treat the focus subsequent to recovery from the gonococcemia.

313 WEST 33RD STREET

References

1. Filler, William: Gonococcemia with Recovery, *J.A.M.A.* 100:1149, 1933.
2. Garlock, J. C.: Gonococcal Bacteriemia in a Woman with Cure by Surgical Intervention, *J.A.M.A.* 97:999, 1931.
3. Rubenstone, A. I., and Israel, Leon: Gonococcemia with Recovery, *J.A.M.A.* 99:1684, 1932.

GOVERNMENT MEDICAL POSITIONS OPEN

The U. S. Civil Service Commission announces open competitive examinations for two Children's Bureau positions and for Principal Medical Officer of the Indian Service at Large.

Applications for the positions of director, Division of Maternal and Child Health, \$6,500 a year, and director, Crippled Children's Division, \$6,500 a year, Children's Bureau, Department of Labor, must be on file with the U. S. Civil Service Commission, Washington, D. C., not later than December 9, 1935. The salaries are subject to a reduction of 3½ per cent toward a retirement annuity. Applicants must have been graduated from a medical school of recognized standing with a degree of M. D. and, in addition, must have had certain specified experience.

Applications for the position of principal medical officer, Indian Service at Large, must be on file with the U. S. Civil Service Commission, Washington, D. C., not later

than December 9, 1935. The entrance salary is \$5,600 a year, subject to a deduction of 3½ per cent toward a retirement annuity.

Applicants must have been graduated from a recognized medical school with a degree of M. D. and must be licensed to practice medicine in a State or Territory, or in the District of Columbia. They must have had not less than 5 years' experience in the vaccination of newborn infants with bacillin Calmette-Guerin vaccine according to the method of Calmette, and not less than 3 years' experience in city, State, or Federal public health laboratories with work in tuberculosis. The two types of experience mentioned may run concurrently.

Full information may be obtained from the Secretary of the United States Civil Service Board of Examiners at the post office or customhouse in any city which has a post office of the first or the second class, or from the United States Civil Service Commission, Washington, D. C.

THE BORDERLINE CONDITIONS BETWEEN MEDICINE AND SURGERY

EDWARD L. YOUNG, JR., M.D., F.A.C.S., *Boston, Mass*

In order properly to discuss the subject which we have undertaken to bring before you, it is necessary that we get clearly before us the exact place in the general scheme of medicine that is held by what we call the medical man or the general practitioner, and the surgeon, and I think a short review of the development of the surgeon may help us to understand a little better his place in the picture.

A great many years ago, or to put it in the words of Kipling, "In the high and far off times when the world was very young," there was no true knowledge of medicine and those who attempted in any way to influence disease belonged largely to the priesthood, and aside from a few empiric remedies, relied mostly on magic and incantations. As a separate group of men gradually evolved who took unto themselves the care of the human body in disease, their essential ignorance still necessitated much of the old mysticism and magic. All of the trappings of the profession which would accentuate the awesomeness in the mind of the patient were very much to the front both in clothing and in other outward evidences of their position, and also in the mysterious manners which they affected. These were really necessary to take the place of or rather, to cover up their lack of knowledge. So great was the need of sustaining their position that any descent to the lowly level of actually doing something was undreamed of. It was beneath their dignity, for instance, to have anything to do directly with blood letting in any form so it came about that barbers were entrusted with all necessary operations.

As the medical profession began to acquire more actual knowledge, to obtain more real dignity with less of the hocus-pocus of the Indian medicine man, the few surgical procedures were carried out by the same individual who prescribed the other remedies. This is the natural evolution—the needed and at that time relatively simple surgery was part of the care of the patient and as such was han-

dled by the doctor in charge. In fact, it is within the memory of a few men now practicing when the essentials of all medicine could be comprehended by one industrious individual, and when the limited surgery of the day might be included in his practice and at that, not unfairly to the patient. For a long time indeed the doctor who carried out the surgical procedures was a general practitioner who had special deftness with his fingers, who was a better mechanic than his fellows, and who in addition, had a particular liking for such treatment. He was still, however, a general practitioner.

With the advent of anesthesia, antiseptics, and asepsis the strides made by the surgeon became so great, the number of surgical procedures multiplied to such an extent and the variety of technical manoeuvres became so bewildering, that surgery became a specialty. Today surgery itself is even divided into various branches and so great is the variety that no one surgeon can be proficient in all of them. This has resulted in a condition which is a weakness of surgery as well as of all the so called specialties, namely—that they require so much study in their own peculiar details, so much concentration on technic, such a close view of a localized lesion, that there may be too little attention paid to the patient as a whole. The phrase "The operation was a success but the patient died" would not have been coined or if once spoken in jest, would not have persisted as it has, had there not been some basis for it.

Other than the cause just mentioned—lack of true medical perspective—is there any other cause on which we can lay the blame for this seeming though slight failure of surgery? I believe there is—the practice of surgery by too many physicians poorly trained or even untrained in the special technic required. Unfortunately the fees charged by many surgeons often justified by the skill used and the results obtained, though equally often we are sorry to say out of proportion to either, have resulted in the attempt of too

many poorly trained individuals to reap some of what they thought was an easy harvest. The remedy would seem to be obvious though difficult of attainment. The result of all this has been to cause some confusion in both lay and professional minds as to the exact relationship between the general practitioner and the surgeon. Too many people for instance, thinking they can take a short cut, go directly to a physician who has recently taken out a friend's appendix, report a pain in the right lower quadrant, and later with the memory of a painful hospital experience and a depleted pocketbook, recognize the same pain and finally are forced to go through the diagnostic procedures which they had tried to avoid.

In attempting to clear up this situation a little in our own minds, let us go back for a moment to first principles. A physician has as his first aim the alleviation of human suffering, whether this be the correction of a disease in an individual or the correction of an epidemic in a community, or any one of the other various forms in which his activities may be needed today. Here we are dealing with the relation of the physician, the surgeon, and the individual, and the subject with which this treatise deals, in one sense should have no existence because an accurate diagnosis is the one essential thing in order to cope successfully with the diseased individual. This, of course, is a problem in which either or both the physician and the surgeon are interested, for when an accurate diagnosis is made, the problem is then generally settled as there is a standard form of treatment for the larger number of diseases. It is only when this accurate diagnosis can be made that there is any reasonable expectation of success.

Surgery is only one method of treatment and we must do away with the type of specialist, surgeon or any other, where he as the old joke says "knows more and more about less and less," until he actually knows so much about so little that he has completely lost his balance, and is of absolutely no use in the treatment of a patient however good he may be in the treatment of a limited type of lesion. That type of person may occasionally be of value as a pure technician under the guidance of a competent medical man, but he has no

right to be treating the patient. A surgeon as well as a medical man, must have a sufficient knowledge of fundamental medicine and of the general principles of diagnosis so that he is able to evaluate the patient as a whole, as well as to give him the special treatment for which his training may fit him. Consequently, the subject of the borderline conditions between medicine and surgery, comes down to this—that both the medical man and the surgeon shall stand on the common foundation of a knowledge of the whole patient, that they shall both be able to diagnose intelligently, and cooperate so that the medical man on the one hand shall not lose the opportunity by procrastination or by lack of knowledge of what can be accomplished by surgery to give the patient the full benefit of any operative procedure. Nor should the surgeon because of lack of special training or inability to size up the whole picture, undertake something which is either more than the particular individual can stand, or likely to do damage greater than the benefit he is trying to bring about.

What are some of the things in which teamwork is necessary? As a matter of fact they are legion and only a few of them can be discussed here. There are two ways in which this subject might be deliberated at this particular point. We might outline some of the newer conditions in which with competent teamwork due to more accurate diagnosis, it is possible to recognize some rare condition such as adenoma of the parathyroids, and with skillful surgery work a miraculous cure, or we might try and evaluate for you the attempts to treat essential hypertension by partial adrenalectomy. It seems to me that in this group we can occupy ourselves more profitably with a discussion of some of the conditions where accurate teamwork should be more frequently called into play in general practice, and here I want to emphasize what I believe to be the essential part of this cooperation—that the condition under discussion shall not be *between* medicine and surgery, but shall be included within both, and that in such close cooperation better results for the patient may be achieved.

The first thing in which teamwork is necessary includes that very broad sub-

ject of chronic indigestion. This is probably one of the most important problems that come into the hands of the medical profession. The very large role which indigestion plays in the life of the nation has never been properly evaluated but when we realize that we are considering conditions from peptic ulcer to carcinoma of the stomach and large bowel, and all of the various phases of biliary tract disease, we realize it is a large field and I think the whole subject is one in which a very close cooperation between the internist and surgeon is necessary.

Peptic ulcer alone, whether in the stomach or duodenum, is probably the cause of more human misery than has ever been credited to it. It is the cause of many deaths not only due directly to the various complications but also to some condition which would never have originated, or at least not have been fatal had it not been for the ill health and lowered general condition due to the ulcer. If we add to this actual physical misery, the number of households depressed and the divorces from the bad temper arising out of it, it would take first place in the list of important diseases.

The etiology of this condition is not well understood. In fact, it is probably multiple but not *per se* a surgical disease though its complications are, and a recognition of these two facts by both parts of the team will result in a cooperation which will work for the good of the patient. I believe it is altogether too common to have a posterior gastroenterostomy done without adequate medical treatment in the first place, and if there is any patient that is difficult to handle surgically, it is the patient on whom a PGE has been done without relief. It is of the highest importance that all of the known factors coming into play should be considered and in so far as possible, remedied as an absolute necessity before surgery is in any way considered. This means a number of things: (1) the patient's general physical condition, particularly possible foci of infection, must be studied, (2) the patient's temperament, nervous tension, and fatigue must be considered, and (3) he or she must be educated to recognize the role which they play in this disease.

It is true that most people living under

the high tension of modern conditions are unable to change what may be their basic tendency toward the high tension existence. On the other hand, many people when they do understand the role played by this factor, can lift themselves up almost as if they were 'by their bootstraps,' and either by a change of business or by actual will power can lessen the tendency toward damage. The ability to regulate their lives so that frequent feedings and sufficient rest can be obtained, must be consummated, but when all has been done there will still be certain cases where there is no relief, and there is where the teamwork comes in.

It is just as essential for the surgeon, as for the internist, to know the whole background of a disease because I believe there will be a certain type of patient where symptoms will not be helped by either surgery or medicine, and I am not sure that there are not certain extremes in this class when it is wise to either avoid surgery completely or decide to do the radical operation the first time with the feeling that it will be the last regardless of results. Following operation, the surgeon and the internist both must follow these cases as they will continue to need supervision, and in a certain percentage of cases there will be some sequelae such as gastroduodenal ulcer, or continued bleeding which may require further surgery as the only method of treatment. It is essential also that the surgeon be particularly trained in this very complicated type of surgery because it some times happens that what is planned before the incision is made, cannot be carried out when the abdomen is opened. I believe the proper teamwork in these cases, perhaps will result in not less surgery, but less *unsuccessful* surgery. There may be fewer gastric ulcers which are allowed to go to the point where they are malignant when operation is finally undertaken, also fewer cases that have first one and then another, and then still another operation for relief of ulcer symptoms, until finally an autopsy shows what a grand mess was present at the finish.

We are given a very gloomy picture generally about gastric carcinoma, but I think that we are coming to recognize one bright spot in it, and that is, that

given a successful recovery from a gastric resection, both the prolongation of life and also the actual number of cures is very gratifying. This, of course, means just one thing to the medical profession; namely, an increased keenness to make an early diagnosis on the part of the internist and an increased skill and willingness to undertake radical surgery on the part of the operator.

If we now go from the upper to the lower end of the intestinal tract, we are confronted with various conditions where the successful outcome for the patient depends on both early diagnosis and properly applied treatment. One of the commonest conditions which we meet is intestinal obstruction, the most insidious form of which is the slow encroachment on the lumen of the bowel by a carcinoma. It is not uncommon to see a patient who calls the doctor in, only after several days without a bowel movement and with increasing distention and vomiting, and I am sorry to say, it is not uncommon to see the general practitioner spend still one, two, three or even four days trying to get something through the intestinal tract. I have two such patients in the hospital at the present time, one of whom went ten days without calling a physician while the other was treated for three days by the physician before reaching the hospital. It is true that the symptoms are apparently not too serious in many of these cases, but here safety for the patient lies in early diagnosis and in adequate surgery. In all of these cases it is entirely safe to use a barium enema, and in the vast majority of instances the diagnosis is at once evident. The mortality then, with early adequate treatment, drops from a pathetically high figure to one that is very satisfactory.

Another condition of the large bowel; namely, chronic ulcerative colitis, is also in the realm between medicine and surgery. During its early stages and entirely throughout in the milder cases, the disease is non-surgical, but in the more severe types there comes a time when surgery must be invoked, and in many cases it must be seized at once or it is too late. After the ileostomy has been done and the patient improves, there again comes the point where in certain cases the further need of operation has to be con-

sidered because of hemorrhage or persistent toxemia, where a colectomy is in order.

Megacolon is still another disease that must be handled by the team. Fortunately it is not common, and perhaps not of the greatest importance, but because not well understood it is very much in the borderline between medicine and surgery and deeply in need of the cooperation of both. A recognition of the fact that in certain cases it can be started by poor bowel habits, or that a severe chronic spasm of the anal sphincter may actually be the background, may in a few cases lead to a cure with very little surgical and properly planned medical treatment. In cases of a more severe degree, it may not yield to anything short of sympathectomy or a partial colectomy. However, the surgeon is not justified in trying these first any more than the medical man is justified in eliminating them entirely from the scheme of treatment, but I believe that in all cases, adequate medical attempt at cure should be undertaken. The judicious and continued use of enemata, cathartics, physostigmin, and proper diet may result in a cure or at least prove that surgery is necessary.

The last of the subjects which I consider under the broad picture of chronic indigestion, is damage in the biliary tract. Where a definite diagnosis of cholecystitis or cholelithiasis can be made, the prescribed treatment naturally follows. This is of course, surgery, but there are many cases which are borderline either in their diagnosis or in their treatment, and under these conditions again teamwork is essential.

I shall never forget the following case when I was a house officer at the Massachusetts General Hospital under Dr. Maurice Richardson, of beloved fame.

We were consulting with the medical service on which Dr. Frederick Shattuck was chief. There was a case of painless jaundice which had been admitted to the surgical side and no accurate diagnosis could be made, but with the age, the progressive nature of the disease, and the loss of weight and strength, there seemed to be little question but that there was a cancer of the head of the pancreas. Dr. Richardson and Dr. Shattuck always delighted in trying to get the better of each other, and Dr. Richardson in this instance put in a con-

sultation worded somewhat as follows "Do you doubt our diagnosis of cancer of the head of the pancreas? Do you advise operation? If so, why?" The answer came back "To the first question No To the second question, Yes, on the chance of human fallibility."

In this particular instance, the removal of a silent common duct stone and the cure of the patient made a tremendous impression on the minds of all of the young house staff.

Jaundice may point also to the possibility of some condition where surgery other than that of gall bladder or common duct may be indicated, and in obscure cases it is only after the utmost has been used in the line of medical skill that it is safe to say surgery is or is not indicated.

One of the conditions which bothers a good deal in every thyroid clinic, is the toxic patient who has been treated with iodine by his or her family physician without the full knowledge of what this is meant to do and without any cooperation with a competent thyroid surgeon. The effect of the iodine, very gratifying at first, wears off although giving the patient and the physician a false sense of security. The disease progresses with less and less alleviation from iodine, until reaching the surgeon's hands for final treatment, the patient may be badly toxic with a damaged myocardium and with surgery made more dangerous because of the inability to get the needed temporary response from preoperative medication. Here is one more instance where diagnosis must not only be accurate but the limitations of medical treatment and the success of adequate surgical treatment must be recognized early and appropriate treatment instituted. Of course, cases in which the patient does not report to any physician until the damage is extensive, need the most careful cooperation between the medical man and surgeon in order to insure success.

In the urinary tract as well, there are many conditions which are puzzling, and until "all of the packing is out of the case," it is impossible to say whether their ultimate disposal lies in the hands of the medical man or the surgeon. It often is true that the greatest possible degree of cooperation may be necessary

before the diagnosis can be accurately settled. Hematuria, for instance, should of course, respond to the dictum that blood coming from any orifice of the human body when not due to a known cause must be investigated, but can we say that because the surgeon sees a papillary tumor of the bladder on first cystoscopy that he must operate for a carcinoma? If there is not the recognition in a certain number of these cases that the patient is suffering from hypertension with chronic arteriosclerotic nephritis the surgeon may operate and find that the papilloma was actually the bleached out surface of a partially organized blood clot and that there is no surgical disease present at all.

One of the most bothersome situations which we have to face, is the elderly gentleman who comes with the complaint of frequency of urination, some slowness in voiding, and lack of sleep because of frequent nocturia. It has not been unknown to have such a patient operated on for the removal of the prostate when actually all his symptoms were due to hypertension and arteriosclerotic nephritis. It is equally embarrassing, I am told, to operate for prostatic obstruction because of some retention of urine with difficulty in voiding, and a slightly enlarged prostate to feel by rectum, and then have the bladder refuse to heal because of the failure of recognition of central nervous system disease.

At the Faulkner Hospital in Boston, we are trying what we consider a very interesting experiment of running a community hospital where we can give the patient the best possible service in accordance with the ideas which I have outlined in the first part of this treatise. We have all house cases admitted to the diagnostic service regardless of what their local physician may give as admission diagnosis. This is in charge of the medical department but includes all other specialties and certain things taken for granted. If the admission diagnosis is that of an acute abdominal emergency or some other condition automatically considered surgical, the surgeon as well as the medical man is notified at once on the patient's admission. If the acute abdominal emergency turns out to be an obscure pulmonary condition, as it has on one

occasion recently, we feel that the patient's best chance is in having both points of view. In this case, the roentgenologist had to be brought into play before the diagnosis could be made. If the condition is one which involves the possibility of less immediate surgical cooperation, the consultation is put in at once and the surgeon is supposed to check over the patient at his earliest visit. After the diagnosis has been settled, the vast majority of these cases are then naturally routine in their treatment, either a cholecystectomy on the surgical side, treatment for so-called catharrhal jaundice on the medical side, or either removal of a papilloma of the bladder or treatment of hypertension and chronic nephritis.

Even with the diagnosis in mind, the picture often is of sufficient complexity so that as in the case recently seen, the presence of a rather serious diabetes, a certain amount of myocarditis, and a gall bladder full of stones with a possible common duct stone has necessitated the continued cooperation of several individuals and as many points of view before the final agreement of all the physicians and the patient was reached. In other words, we do not consider any case in the realm between medicine and surgery, but all coming within the field where both surgeon and internist are interested in the patient and working toward the same end, each to use his own distinctive training toward that end. We feel that this arrangement is better for the patients than to have them admitted "medical" or "surgical" depending on the

admission diagnosis. It has been very interesting to note that at the Massachusetts General Hospital if a chronic appendix is admitted on the surgical side, he is seven times as likely to be operated on as though he were admitted to the medical side. This, of course, should not be. He should have the same study and the same conclusion reached on a diagnostic service, and as a result, the incidence of operation should be somewhere between the two extremes.

Summary

In closing then, let me repeat what I believe to be the fundamental principle. A physician has the alleviation of human suffering as his first and sole aim. The field of medicine is so broad that no one individual can comprehend it all. This necessitates the formation of specialties, but no specialty can justify its existence if it allows the physician to become so narrow that he is unable to treat the condition in which he is interested without benefit to the individual as a whole. No condition is ever a borderline condition *between* medicine and surgery, but a great many should be embraced by both medicine and surgery in order to give the patient the best possible treatment. No surgeon or any other specialist has any right to practice medicine unless he is able to accomplish two things—to treat the patient as a whole with a reasonable degree of skill and to handle his particular specialty with the highest possible degree of skill.

279 CLARENDON ST.

ELECTIONS AT ROCHESTER AND MONROE COUNTY

DR. WILLIAM A. SAWYER has been re-elected president of the Tuberculosis and Health Association of Rochester and Monroe County.

The action was taken on Oct. 30 at a meeting of the board of directors who also re-elected Joseph P. MacSweeney and Dr. Edward G. Whipple, vice-presidents; Frederick L. Higgins, treasurer, and Allan C. Ross, assistant treasurer.

Mark B. Furman, district superintendent of schools, of East Rochester, recently elected chairman of the County Health Committee of the association, was elected vice-president and Dr. George E. Sanders of

Greece was elected assistant treasurer. Health examination of all students was urged.

An adequate public health nursing service was cited as the outstanding need in Monroe County outside of Rochester. The urgency of securing more public health nurses was stressed in reports presented by Dr. E. G. Whipple, chairman of the Public Health Committee of the Medical Society of Monroe County; Dr. Charles G. Lenhart, president of the Monroe County Health Officers' Association; Dr. B. R. Wakeman, district state health officer, and Dr. B. J. Slater, representing the Tuberculosis and Health Association.

THE NOVOCAIN PACK

A Contribution to the Therapy of Fresh Accidental Wounds

MILIO FRITZ, M D, *Brooklyn*
Junior House Surgeon Brooklyn Hospital
and

E K TANNER, M D, *Brooklyn*
Attending Surgeon, Brooklyn Hospital

In emergency ward work, no small percentage of cases is concerned with comparatively fresh gashes involving superficial tissues, necessitating a varying number of sutures after hemostasis and cleansing have been accomplished. This article does not include wounds so extensive that shock is a dominant part of the picture, or wounds which demand hospitalization for treatment.

Cleansing such small wounds and suturing them is usually undertaken without anesthesia since the pain, although severe, is of such short duration that it can be borne. Yet with children and in the very sensitive, such treatment has seemed unnecessarily brutal.

Bernard Fantus¹ in his article on the treatment of Fresh Accidental Wounds says, "If anesthesia is required for the treatment of the wound, nitrous oxide inhalation is the agent of choice."

In a criticism of this, one who signs himself "M D" says

For many years I have been infiltrating the edges of such accidental wounds after a preliminary cleansing to facilitate a proper painless cleansing, and placing of the necessary stitches. When the needle for infiltration is started through the fresh wound, it is painless. I have never seen any other physician use local anesthesia in such a case and after many trials, I can see no unanswerable objections to the method.

The above statement was of interest to us in the Brooklyn Hospital and, whereas, it was not possible on the emergency ward to use nitrous oxide for small wounds, a trial was given to the method of infiltration. Three disadvantages were found in this method: (1) The "preliminary cleansing" was often painful. (2) The insertion of a needle into the wound edges, in addition to the possibility of introducing infection, was painful. (3) Infiltration often distorted tissues in such

a manner as to interfere with a good cosmetic effect.

On one occasion a young man came into the emergency ward with a deep laceration on the hypothenar eminence of his left hand, which was very dirty. In view of the contamination of the wound, infiltration was clearly contraindicated, but since the nurse had already opened two vials of one per cent novocain and since it seemed a shame to waste it, a strip of gauze was laid in the wound and the novocain poured on it with the hope that anesthesia might be obtained. The novocain pack was allowed to stay in place for about eight minutes while the nurse and doctor scrubbed and got ready the tray preparatory to suturing the wound. The wound was then thoroughly cleansed and five sutures taken without the patient experiencing any pain at all.

Since then, in all such cases, the novocain pack has been used successfully. Lacerations of the fingers, eyelids, face, cheek, chin have all been treated without pain—the area of effective anesthesia extending about 1 cm. beyond the wound edges.

The following three cases are of particular interest.

Case I A little girl, 17 months old, was knocked against the door handle of a car when it was struck from behind by another car. She received a laceration about four inches in length on her left zygoma extending from the external canthus onto the cheek. A novocain pack was used and the suturing was absolutely painless; the child crying only when sterile gauze was placed over the wound and the eye. The child did not move so a fine cosmetic result was made possible.

Case II A negro received a razor gash which involved his right upper eyelid cutting down to the conjunctiva but not involving it. Seven sutures were painlessly

inserted after the novocain pack had stayed in place six minutes.

Case III. A boy had grasped an open knife in his left hand receiving lacerations of the flexor surfaces of the distal phalanges of his third and fourth fingers. A novocain pack was applied to the third finger, but not to the fourth. Suturing of the third finger was painless, but this was not the case where the fourth finger was sutured up.

The only possible contraindication has been the freely bleeding wound which washes out the novocain so that it cannot be effective, and often this can be controlled by topical application of 1:1000 adrenalin.

It was believed that a five per cent solution of novocain in normal saline would act more quickly and extend the area of effective anesthesia. Such a solution was made available, and whereas the area of effective anesthesia has not penetrated further than 1 cm. from the wound edges, the time for such effect has been cut from eight to about five minutes.

Since this method of local anesthesia, others in the hospital have applied it successfully, and in the few cases where complete anesthesia was not obtained owing to hemorrhage or other reasons, they feel that the pain was much reduced.

Summary

1. Small fresh accidental wounds have been rendered anesthetic by the application of a novocain pack (1%) for 5-8 minutes, and five per cent in 5 minutes.

2. Cleansing and suturing of such wounds was done without pain, thus ensuring better working conditions for the surgeon, better cosmetic results for the patient, and no pain for the latter.

3. The only contraindication is the freshly bleeding wound in which it can be used after hemorrhage has ceased, or has been controlled by topical application of 1:1000 adrenalin.

4. This method has the advantage of simplicity over the nitrous oxide method, and it obviates the danger of infection, the pain of preliminary cleansing, of the first needle prick, and the tissue distortion of the infiltration method.

5. Area of effective anesthesia extends about 1 cm. beyond wound edges.

References

1. Fantus, Bernard: Therapy of Fresh Accidental Wounds, *J.A.M.A.*, 103:108, 1934.
2. "M.D.": *J.A.M.A.*, 103:1375, 1934.

BOOK REVIEW

(For other reviews see pages 1189 and 1238)

The Patient and the Weather. By William F. Petersen, M.D., with the assistance of Margaret E. Milliken, S.M. v. 2. *Autonomic Dysintegration*. Quarto of 530 pages, illustrated. Ann Arbor, Mich., Edwards Brothers, Inc., 1934. Cloth, \$6.50.

Volume II of the triad, "The Patient and the Weather," deals with what the author calls "autonomic dysintegration" in which he presents observations made on individuals who are unusually responsive to the environment. He has had the cooperation of several colleagues. Especial attention is paid to a possible explanation of headache in general, migraine, epilepsy, asthma, gastric ulcer, arthritis and urticaria.

Petersen made a detailed chemical and clinical analysis of patients suffering from these diseases. According to him they occur in unstable individuals, particularly affected by meteorological conditions which are

capable of inducing vasomotor spasm with consequent injury to the organs of the body. The author feels that there is a definite relationship between the person, the chemical state of the blood, and meteorological changes to account for the attacks of migraine, epilepsy, asthma, etc. During the period of change from one type of air to another, when it is necessary to make a speedy physiological adjustment in the body, there is apt to occur an alkalosis with resulting spasm of the blood vessels.

There is a great deal of evidence to substantiate Peteren's observations in the above diseases, but when the author considers the neuroses in the same category he undoubtedly will find few psychiatrists or psychoanalysts to be in accord with him. His discussion of the neuroses leaves a great deal to be desired.

JOSEPH L. ABRAMSON

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EDITORIALS

While the Patriot Sleeps¹

The restless modern spirit has not the patience of the ancient. We hurry along roads toward goals of whose form and character we are seemingly unaware. As we watch the current scene, we note new evidence in many social welfare programs to create a fixed proletarian class and establish a state of perpetual dependence among groups in our population.

Recently orders to PWA limited jobs to those who were on relief.¹ They who had been strong enough to carry on with only the barest sort of subsistence, preferring this to public aid, found themselves penalized for their self sufficiency. We note social workers endorsing a low dietary regime based on minimum quantities of poorest quality of foods, on the one hand, and on the other asking for a costly, inferior system of medical care to combat the resultant ill health. Millions are spent on governmental health surveys which eventually will reveal nothing that is not generally known, but moneys to remove and replace breeding spots of disease and corruption are not given, or spent. In Westchester County it is proposed to spend almost half a million dollars in stamping out malaria, to the consternation of the local health officials

who are apparently unaware that they are faced with a malaria problem!

The living standards of American labor have sunk appallingly in the past six years, but the proposals are nevertheless made, that the slim pay envelopes of labor shall be depleted further to provide medical care for a small percentage who undoubtedly could more properly and at less expense be aided out of general tax funds.

Contemplating these trends we fear the loss of one of our proudest rights which the American political set-up heretofore has proffered to every one,—the right of self improvement without obstacle or hindrance by government. The establishment of a dominant social bureaucracy,—which must come if sickness insurance comes,—under which the status of labor and of medicine would be fixed, will lose to both the inherent right to advance and to improve their level of existence and their degree of comfort and security in the community.

Any measure designed primarily to mitigate a situation does not permanently improve it. As physicians we know that a palliative is seldom curative.

Consider the bureaucracy itself and what it will encompass. President Butler of Columbia University recently told us how taxation brings in its train fundamental changes in governmental struc-

¹ Editorial, *New York Medical Week*, November 16, 1935

tures. The reality in which human lives and the human mind move and live is the reality of long, unchanging tradition. American political ideology being the reality which it is, and we Americans being what we are, we must comprehend what a bureaucracy, such as would result from health insurance, would mean politically in our country. The resulting political machine which would enroll professional men, labor, industrial and social workers in a self interested group, would make the old time labor or veterans' organizations and other political blocks seem Lilliputian in comparison.

While Liberalism generally is under attack, when our democracy is being insidiously undermined, as Mark Sullivan² points out in his comparison of the present state of our electorate with that of the Russian Kulak farmers of 1916,—as “not knowing that all around them were forces, and men who, within a year, would destroy the order of society * * *,”—then let us beware lest in our striving for a theoretical result we are not forced to swallow a bitter pill,—entailing among other things the loss of our liberties,—because it is temptingly coated by false arguments and fallacious reasoning.

High Time For A Halt

Recent developments in the milk campaign indicate that commercial advertising methods and health education do not mix any better than oil and water even when their union is authorized by the government. Beginning with sound and reasonable claims, the state's copy-writers fell into the usual pitfalls of exaggeration and distortion. From an excellent food, milk became first a reducer and then an alkalinizer. The next stage in the process of apotheosis by advertising is usually acclaim as a cure for cancer, tuberculosis or hypertension.

Probably such gross fraud would never have been essayed in this particular instance. In any event, this JOURNAL and

subsequently the J.A.M.A. pointed out the folly of trying to sell milk as a “patent medicine” or “cure for several complaints.”

Following these statements, the New York State Commissioner of Health agreed that “any effort to sell milk as a medicine is not a sound appeal.”

When the drink-more-milk campaign was inaugurated, many physicians felt that it was more apt to increase profits for the milk industry than to better public health. The main reason why many families do not use milk is that they cannot afford it; and the state drive has done nothing to bring it within their means. Even from the purely educational viewpoint, the methods employed suggest far more devotion to the principles of high pressure salesmanship than to reasoned, accurate instruction. Is it any wonder that the profession distrusts state control!

The Panel System Evolves

Profound changes in medical practice are taking place and are hardly noticed. These changes are bringing problems which we shall soon be obliged to answer. For example, since the enactment of the new Workmen's Compensation Law, a panel system is coming into being (created under the law), by the County Medical Societies. There are well founded rumors that the TERA work will be done by physicians on these same panels. This will necessitate that men who did not enroll for compensation work will have to do so, if they want to work for the TERA. There are panels of approved groups in the Health Department of New York City.

Who pays the expense of creating and administering these panels? If the County Societies do so, they maintain their autonomy; but if they pass this power over to the State, then and there they increase the scope and horizon of State Medicine. Who pays the piper calls the tune!

There is no question more pressing for solution. The answer largely will determine how much further into the territory

² Mark Sullivan, New Deal to New Order.—*New York Herald Tribune*. November 17, 1935.

of the independent medical field State medicine shall go

Progress at Three Cents a Day

A number of practitioners who have had experience with the group hospitalization insurance offered by the Associated Hospital Service have expressed their satisfaction with the workings of this plan. Patients who might otherwise be compelled to defer treatment are able to enter a hospital when necessary without applying for charity or contracting debts. The physician is more often and more promptly paid because available funds are not eaten up by institutional charges.

Naturally there can be no claims of perfection for so new a system. Some Roentgenologists, for example, fear that the inclusion of "ordinary Roentgenograms" in the insurance agreement may result in exploitation of their services. Offsetting this possibility is the fact that organized medicine is represented on the voting board of the Associated Hospital Service and the latter may terminate its contract, after thirty days' notice, with any hospital guilty of a breach of good faith. No institution with any foresight will sacrifice a source of regular income for an occasional illicit profit at the expense of its medical staff.

Cities which have not yet inaugurated group hospitalization services are in a position to benefit by the experience of Greater New York and other communities in which such plans have been in operation for various periods of time. Provision for hospitalization nullifies one of the principal arguments for obligatory pre-payment for sickness by writing off the item which is most likely to overwhelm middle and working class patients. Unlike compulsory health insurance, group hospitalization does not interpose a lay bureaucracy between doctor and patient nor disturb the relationship of the profession to the public in any way. It neither raises taxes nor lowers income to any material extent. This is constructive reform, designed to encourage indi-

vidual independence rather than create a class of perpetual dependents on the state.

The Red Cross Roll Call

The work of the Red Cross in peace time, though less dramatic than during a war, is nevertheless of great benefit. The Red Cross nurse is a familiar figure in hundreds of our communities. Public health nursing, safe-guarding communities against epidemics, and other beneficent health activities commend this organization to us. This year saw their nurses on duty in the dust storms of Kansas, Texas, Colorado, New Mexico, and Oklahoma, as well as during the floods in our own state.

We commend the faithfully performed duties, and ask support for the replenishment of the funds of this organization.

Cholecystitis and Hepatitis

What relationship, if any, exists between cholecystitis and hepatitis has been the subject of much speculation since the publication of Graham's histological studies in 1918.¹ Graham concluded from his investigations that infections of the gall bladder resulted from a primary hepatitis. Subsequent reports by other observers substantiated the presence of changes in the liver where cholecystitis was present but questioned the causal relationship of the former to the latter. Some considered the hepatic pathology as secondary to the lesion in the gall bladder² while others felt that it was not possible to determine which was cause and which was effect.³

With the development of the finer methods of histological technic came the impetus to reinvestigate the basic question of the presence of hepatitis as an associated finding in acute and chronic chole-

¹ Graham, E. A. Hepatitis. A Constant Accompaniment of Cholecystitis, *S G and O*, 26, 521, 1918.

² Koster, H., Goldzieher, M. A., and Collens, W. S. The Relation of Hepatitis to Chronic Cholecystitis, *S G and O*, 50, 959, 1930.

³ Heyd, C. G., MacNeal, W. I., and Killian, J. A. Hepatitis in Its Relation to Inflammatory Disease of the Abdomen, *Am J. Obs and Gyn*, 7, 413, 1924.

cystitis. Colp, Doubilet and Gerber⁴ state that a true estimation of cellular degeneration cannot be determined by ordinary routine histological measures. A granular appearance of the cytoplasm in itself is not evidence of a true degenerative condition, and the presence of fat in the liver cells might be a normal physiological condition. The finding of periportal cellular infiltrations in the presence of cholecystitis cannot be used as a basis for stating that gall bladder infections are accompanied by hepatitis since this pathological phenomenon has been observed too frequently in connection with extrahepatic lesions wherein the biliary tract is uninvolvement.^{5,6}

Since the earliest evidence of cellular degeneration is shown by changes in the mitochondria, Colp conducted his studies of the liver parenchyma, placing special emphasis on the finer cytology. A detailed investigation of forty cases of cholecystitis without jaundice failed to reveal any changes in the liver cells which could possibly coincide with those found in hepatitis wherein the inflammatory process in the framework is associated with diffuse parenchymal changes. On the other hand, where icterus was present prior to operation, focal degeneration of the hepatic cells was sometimes noted, but the presence and extent of such changes were dependent upon the duration of the biliary stasis and were not related to the lesion in the gall bladder.

It may be assumed, from the observations of Colp and his associates, that destruction of liver substance is to be looked for as a sequela of protracted biliary obstruction, and is not to be accepted as a concomitant of cholecystitis. The avoidance of hepatitis therefor would seem to depend upon the earliest relief of the biliary stasis and not upon the

removal of an offending gall bladder *per se*. Finally, the continuance of the academic discussion concerning the relationship of hepatitis and cholecystitis must rest, for the time being, pending possible future determining analyses based upon histological data.

Uric Acid and Marrow Activity

That gout is the result of a disturbance in the uric acid metabolism is an established fact but the predisposing cause of the disease has remained obscure. Always considered a "rich man's disease," it was associated naturally with the imbibing of excessive amounts of alcohol and the ingestion of foods rich in purines. Williamson,¹ however, found that only fifty per cent of his patients were heavy drinkers and he noted that of the remainder four per cent were total abstainers. The continued high output of uric acid in gouty sufferers placed on purine-free diets would tend to indicate that exogenous sources could not wholly account for the increased production of uric acid in these patients.

Krafka² in an experimental study, showed that beside the formerly described sources of endogenous uric acid, another one existed in the extruded nuclei of the normoblasts which are destroyed during the maturation of the erythrocytes. The results of his work would speak for a complete correlation between marrow activity and uric acid production. Riddle³ corroborated this viewpoint by demonstrating that potent liver extracts which enhanced the production of red cells also increased the output of uric acid. Sears⁴ and Fitz⁵ report clinical cases of gout

¹ Williamson, C. S.: Gout: A Clinical Study of 116 Cases, *J.A.M.A.*, 74, 1625, 1920.

² Krafka, J.: Endogenous Uric Acid and Hematopoiesis. *J. Biol. Chem.*, 83, 409, 1929, and 86, 225, 1930.

³ Riddle, M. C., and Sturgis, C. C.: The Endogenous Uric Acid Metabolism in Pernicious Anemia, *J. Clin. Invest.*, 7, 498, 1929.

⁴ Sears, W. G.: The Occurrence of Gout During the Treatment of Pernicious Anemia, *Lancet*, 1, 24, 1932.

⁵ Fitz, R.: Three Cases With Intermittently Painful Joints, Splenomegaly and Anemia. Case I. Gout, *Med. Clin. N. A.*, 18, 1053, 1925.

⁴ Colp, R., Doubilet, H., and Gerber, I. E.: The Relation of Cholecystitis to Pathologic Changes in the Liver, *Ann. Surg.*, Aug. 1935.

⁵ Kahlstorf, A.: Untersuchungen ueber Infiltrate im periportalen Bindegewebe der Leber. *Beitr. z. path. Anat. u. z. allg. Path.*, 78, 512, 1927.

⁶ Martin, W.: Hepatitis and Its Relation to Cholecystitis, *Ann. Surg.*, 85, 535, 1927.

appearing after liver therapy for anaemia. The "gouty diatheses" observed in cases of polycythemia would further tend to substantiate the close association of the marrow system and uric acid metabolism.

Krafka⁶ states that anything which stimulates the erythropoietic system must be considered as an etiological factor in the production of gout since it increases the uric acid content in the body and that, in the treatment of this disease, hemolytic and hematopoietic agents must be used with discretion. He also feels that gout as such has not become extinct but "now goes about disguised under other names."

CURRENT COMMENT

"THE MUCH DISCUSSED Social Security Act was finally approved by Congress on August 14, 1935. * * * This act is to provide for the general welfare of the people by the establishment of a system of Federal Old Age benefits, and to aid the several states in making more adequate provisions for aged persons, blind persons, dependent and crippled children, maternal and child welfare, public health and the administration of their unemployment compensation laws. * * * The new law is a laugh on Scientific Medicine * * * even now many men in the medical profession may be dazzled to blindness by the announcement that under the S.S.A. comes an authorization for an annual appropriation of eight million dollars to be allotted by the Surgeon-General of the Public Health Service with the approval of the Secretary of the Treasury, the States, Counties Health Districts and other political subdivisions, to aid them in establishing and maintaining adequate public health services. * * * To this appropriation comes another two million dollars, annually to cover the pay and prerequisites of Personnel of the Public Health Service detailed to cooperate with Health Authorities of any state, and for investigation of disease and problems of sanitation. To fulfill the requirements of the act, the services of the Medical Profession will be absolutely necessary; therefore, it is vitally important that every physician be familiar with those provisions that concern the practice of medicine."

⁶ Krafka, J.: A Neglected Factor in the Etiology of Gout, *J. of Bone and Joint Surg.*, 17, 1049, Oct. 1935.

"Even the dullest economist discerns readily the fist of politics clutched in the cash box in the appropriations of this provision. * * * It is easy to prophesy that when it comes to the working out of the provisions of the plan, the 'stricken' who get most aid will be those who profited the greatest through the Maternity Act appropriation, that is, the politically stricken henchmen of Big Politics who need jobs. The Shepherd Towner Act bought no diapers or swaddling clothes for infants, nor sheets, night gowns, fuel or shelter for mothers, but it did buy all these and more for the men and women, paid by heavy taxes out of the pockets of burdened taxpayers, who went along telling mothers how to feed children if they had food to give them. It is noteworthy that none of these tax-wrested millions were turned over to the Medical Profession to administer. We, therefore, feel that it is up to the A.M.A., State Medical Societies and local County Medical Societies,—all must be actively interested in the administration of the provisions of this Act; interested enough to insure that the high ideals of Economic Security for the individual provided by the Act is attained. It should not be just another Noble Experiment."—Editor, *Bulletin of the Central Medical Council of Brooklyn*, November, 1935.

"ORGANIZED MEDICINE was among the first of the educational organizations to utilize the radio in bringing information about public and personal health to the American people. Since 1923 the use of the radio for health education purposes has been a consistent policy of the medical profession."—W. W. Bauer, Director, Bureau of Health and Public Instruction, A.M.A.

SIR KINGSLEY WOOD, the minister of health (England) at a meeting recently of the London Insurance Committee, which is a committee of physicians which administers the panel system, said, among other things, "that the prescriptions which during the year of his chairmanship had been 4,377,000 had risen to 8,482,000. The English, he thought, were apparently becoming 'a nation of confirmed medicine drinkers.'" According to the London letter to the A.M.A., November 16, 1935, the writer states, "Under the panel system it (prescription) is to be had without payment, and physicians do not care to endanger their popularity by refusing to prescribe. Of course the placebo has always existed in medical practice and sometimes is unavoidable; but when it is to be had only for the trouble of visiting or sending to the panel physician, the result is obvious."

Society Activities

Executive Committee

The Executive Committee has directed the publication of the following:

REGULATIONS GOVERNING MALPRACTICE DEFENSE AND GROUP INSURANCE

Adopted by the House of Delegates of the Medical Society of the State of New York at the Annual Meeting, April 3, 1933

MEMBERS NOT INSURED UNDER THE GROUP PLAN

The Medical Society of the State of New York will furnish to its members the services of the Counsel of the Society in actions brought for alleged malpractice, error, or mistake done or claimed to have been done in the legitimate performance of the duties of their profession as physicians under the following regulations:

The Counsel of the Society will serve as attorney in all actions for alleged malpractice, brought against members in good standing, who must be so certified by its Secretary, excepting as follows:

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed prior to their admission to membership in the State Society.

Members shall not be entitled to malpractice defense if the acts in the suit for which they make application for defense were committed during a period when they were not in good standing, according to Chapter XIV, Section 4, of the By-Laws.

Members shall not be entitled to malpractice defense while residing and/or practicing medicine or surgery outside of the territorial limits of the State of New York.

The Society will not undertake the defense of any member who, after consideration by the Executive Committee, is believed guilty of criminal abortion, feticide, homicide, or any criminal act or who has not complied with the recognized ethical laws in regard to these cases.

Members shall agree not to compromise any claim against them, nor to make settlement in any manner without the advice or consent of the Society given through its attorney.

In the event that a member sued or threatened with suit shall, without the advice or consent of the attorney of the Society, determine to settle or compromise any claims against him, he shall reimburse the Society

for the expense incurred in undertaking his defense, and in default thereof, he shall be deprived of further privilege of malpractice defense.

The Society shall not assume any responsibility for the payment of any sum agreed upon by arbitration in the settlement of claims, or awarded by court verdicts, or for making payments for any purpose whatsoever.

Members of the Society desiring to avail themselves of the privileges of this act shall make application therefor in writing to the Secretary of the Society, and it shall be shown to his satisfaction that they are members in good standing. They shall also furnish the Legal Counsel a complete and accurate statement of their connection with, and treatment of, persons upon which complaints against them are based, giving dates of attendance, names and residences of nurses and of other persons cognizant of facts and circumstances necessary to a clear and definite understanding of all matters in question, and shall furnish such other relevant information and execute such papers as may be required of them by the attorney of the State Society.

In the event of any difference of opinion between a member of the Society and the Counsel concerning the eligibility of a claim for defense, or any other matter having to do with malpractice defense or indemnity, all details shall be presented to the Insurance Committee to be referred with recommendations to the Executive Committee of the Council for its decision.

The foregoing regulations are subject to such change as may from time to time be authorized by the Executive Committee of the Council or the House of Delegates.

MEMBERS INSURED UNDER THE GROUP PLAN

All members in good standing shall be entitled to malpractice defense and indemnity in the Group Plan of Insurance on payment of the premium due on the policy selected, but the amount of insurance protection granted to any member may be limited at the discretion of the Executive Committee of the Council, subject to petition for reconsideration.

When upon the final completion of the defense of any suit or claim it shall appear to the satisfaction of the Executive Committee that the medical procedure, conduct or attitude of the member involved was such

that it could not have the approval of competent medical opinion generally and that the continuance of such medical procedure, conduct or attitude would constitute a burden to the Society's Group Insurance Plan more hazardous than that contemplated in what is generally accepted as the competent practice of medicine, the Society shall have the right to withdraw from such member the privilege of renewal of his indemnity insurance under that Plan. Nothing in this rule shall deny such member a rehearing by the Executive Committee. This rule shall also not abrogate such member's right to subsequent malpractice defense by the Society.

If an assured shall fail to maintain in good standing his membership in the State Society, according to Chapter XIV, Section 4, of the By-Laws, the policy, so far as it applies to such assured, shall be cancelled as of the date upon which he ceased to be a member in good standing. A notice to this effect shall be mailed to the member's last address, and the Company will return upon demand and surrender of his certificate, the unearned premium due him on account of such cancellation. If the member is reinstated by payment of dues, the former policy cannot again be put in force but the member can secure a new policy under the same conditions as if he were a new member of the Society. This rule shall become operative if and when it is written into the policy of the Group Plan.

The Group Plan of Insurance shall insure a member within the limits of his policy against loss growing out of suits or claims for malpractice, error or mistake, committed or alleged to have been committed by an insured member in the legal practice of his profession or by any assistant of such a member, whether in institutional or private practice, in the treatment or care of a patient previously seen and diagnosed by such a member and for whom the member has directed a course of treatment or care.

The Group Plan of Insurance shall not cover the liability of an insured member on account of the use of x-ray for therapeutic treatment, the employment of partners, associates, assistants, technicians or nurses to practice medicine in his name independently of his personal diagnosis and specific instructions as to the treatment or care to be given, nor shall it cover the liability which such a member may have by reason of his ownership in whole or in part of any association, partnership, clinic, hospital, sanitarium, dispensary or any enterprise other than his personal practice of medicine therein. The liability for such ownership constitutes additional hazards not con-

templated under the Group policy or rates, and losses on account thereof shall not be charged against the experiences of the Group Plan. Protection against these hazards shall, upon request and the payment of an additional premium, be furnished by the carrier by endorsement upon members' Group Plan Certificate or under an additional policy of insurance when necessary.

The Group Plan policy shall not cover the liability which an insured member may have on account of injury to patients from causes other than medical treatment, care or advice, nor for injury to persons other than patients from any cause whatsoever. Protection on account of such losses can only be had under general liability or workmen's compensation insurance.

When in the course of duties imposed upon him as a medical officer of the State, or any political sub-division thereof, an insured member shall be required to render medical opinion, he shall be fully protected under his Group Insurance against the consequences of such an opinion provided it shall have been given to competent authority and not made public by him.

All members of the Counties in Greater New York and Rockland, Westchester, Nassau and Suffolk, desiring insurance protection in the Group Plan of the State Society, shall secure that protection through the Authorized Indemnity Representative of the Society, Mr. Harry F. Wanvig.

MEMBERS INSURED BY COMPANIES OTHER THAN THE CARRIER OF THE GROUP PLAN

A member who elects to secure malpractice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York. If the member desires this service under the circumstances, all the regulations as detailed above applying to members not insured under the Group Plan must be observed. At the time the action is begun, and not later, the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, date of policy and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the Carrier of the Group Plan in like instance. Also that he shall not be required to consult with or receive instructions

from the Company as to the manner of defense, and that the Company will accept his opinion on the final disposition of the action.

As Companies other than the Carrier of the Group Plan usually compel the holders of their policies to accept defense by the Legal Counsel of the Company concerned, the above would not apply. It is essential, however, that members so insured shall also enjoy the benefits of the services of the Counsel of the Medical Society of the State of New York, if desired; but it is obvious that such service will be restricted by the rule of the Insurance Company cited above.

Malpractice Insurance Committee

The Executive Committee of the Medical Society of the State of New York have turned over to the Insurance Committee the following letter:

November 1, 1935

Daniel S. Dougherty, M.D.,
2 East 103rd Street,
New York City

Dear Doctor Dougherty:

A number of physicians who are members of the County Medical Association, and in turn of the State Association, are interested in renewing their Malpractice Insurance in the Aetna Insurance Company or in writing it on a plan that we have presented to various individual members, at a net cost of approximately \$22.40 for \$5,000/15,000 limits in this territory.

These doctors have asked us to write you and find out if they are within their just rights by so doing and if it will have any effect on their status as members of the New York State Association.

Will you kindly give us the details?

Very sincerely yours

The above letter brings to the attention of the Insurance Committee the significant fact that many of the members of the Medical Society of the State of New York are unfamiliar with the privileges and rights that they enjoy as members of the State Society.

1. A member in good standing who is not insured against malpractice is entitled to malpractice defense by the Counsel of the Medical Society of the State of New York.

2. A member in good standing who is insured against malpractice with the official carrier of the Group Plan is entitled to defense by the Counsel of the Medical Society of the State of New York.

3. A member who elects to secure mal-

Thus while the Legal Counsel of the Medical Society of the State of New York cannot be required under these circumstances to assume control of the defense or to appear as associate counsel, he shall be ready to render to the Counsel of the Insurance Company, if requested, a consultant's opinion and advice provided the Company concerned will compensate him for this service in the same manner as the Group Plan Carrier would do if the member was thus insured.

All previous resolutions heretofore adopted, pertinent to malpractice claims and defense, are hereby rescinded.

practice insurance protection from a company other than the Carrier of the Group Plan shall have the same right of defense by the Counsel of the Medical Society of the State of New York as those members not insured provided said carrier is authorized to do business in the State of New York, but with the following provisions and limitations:

At the time the action is begun, and not later, the Secretary of the Society shall be furnished with the name of the Insurance Company, policy number, the date of policy, and amount of insurance carried. There shall also be presented at the same time a letter from an authorized officer of the Insurance Company certifying that the Company will assume the full cost of the defense including the fees of the Counsel of the Medical Society of the State of New York similar to those paid by the carrier of the Group Plan in like instance. Also that he shall not be required to consult with or receive instructions from the Company as to the manner of defense, and that the Company will accept his opinion on final disposition of the action.

(Regulations Governing Malpractice Defense and Group Insurance: Adopted by the House of Delegates of the Medical Society of the State of New York at the Annual Meeting, April 3, 1933.)

The Insurance Committee are taking this opportunity of bringing once more to the attention of the members the basic fact that when a member insures in a company other than the official carrier, legal defense by the Counsel of the Medical Society of the State of New York is furnished with the above conditions, as adopted by the House of Delegates.

CHAS. GORDON HEYD, M.D., *Chairman*

Committee on Workmen's Compensation

A PUBLIC HEARING has been arranged by the Industrial Commissioner, Elmer F. Andrews, on the schedule of medical fees in

connection with Chapters 258 and 930 of the laws of 1935. This is the schedule recently submitted by the President of the

Medical Society of the State of New York as required by law. The hearing will give all parties interested, physicians, labor, insurance carriers and others an opportunity to discuss the schedule before the Commissioner takes formal action to adopt it as prepared or as it may be amended. The date set is Tuesday, December 3, 1935, at 10:30 A. M. in Hearing Room No. 1, 80 Center Street, New York City.

OCCASION for personal contact, direct or written, between physicians giving medical care to injured workmen and officials of insurance companies writing compensation insurance will frequently arise. For the convenience of the physicians, the State Committee has sought and secured an official list from the Compensation Insurance Rating Board of representatives of the insurance companies who are charged with the responsibility of authorizing special arrangements when needed.

It is recommended by the Committee that the following list be preserved carefully by all physicians for future reference.

**AETNA LIFE INSURANCE COMPANY
AETNA CASUALTY & SURETY COMPANY**

NEW YORK CITY. Dr. B. C. Hamilton, Surgical Advisor, Mr. B. B. Kirk, Asst. Manager, Comp. Claims, 100 William Street.

ALBANY. Mr. Earl S. Jones, Attorney, Standard Building.

BUFFALO. Mr. W. J. Conroy, Adjuster, 1 W. Genesee Street.

ROCHESTER. Mr. L. C. Boyer, Adjuster, Granite Building.

SYRACUSE. Mr. Vernon H. Salmon, Adjuster, Dr. C. P. Hutchins, Director Rehabilitation, Chimes Building.

HARTFORD ACCIDENT & INDEMNITY CO.

New York City and Vicinity, Including the Counties of Nassau, Suffolk, Westchester, Rockland, Orange, Putnam, Dutchess, Ulster, and Sullivan. Dr. Anthony A. Avata, Medical Director, 110 William Street, New York City.

ALBANY. Mr. M. D. Meeker, Claim Representative, 120 State Street.

BUFFALO. Mr. Fred Van Aernam, Claim Representative, 1427 Liberty Bank Bldg.

ROCHESTER. Mr. Mial V. B. Smith, Claim Representative, 406-408 East Avenue Bldg., 49 East Ave.

SYRACUSE. Mr. Raymond S. Bright, Claim Representative, 610 Chimes Bldg., South.

HUDSON-MOHAWK MUTUAL CASUALTY CO.

ALBANY. Mr. Stewart R. Fritts, Claim Manager, 75 State Street.

SYRACUSE. Mr. William A. Douque, Room 203, Durston Bldg.

LIBERTY MUTUAL INSURANCE COMPANY

NEW YORK CITY. Mr. K. T. Mosher, Mr. H. V. Ingham, Mr. F. B. Light, Miss E. Patton, 10 E. 40th Street.

ALBANY. Mr. E. B. Kirk, 488 Broadway.

BINGHAMTON. Mr. E. A. Pierce, 66 Chenango Street.

BUFFALO. Mr. W. E. Dent, Genesee Bldg., 1 W. Genesee Street.

ROCHESTER. Mr. A. B. Irwin, 8 Exchange Street.

SYRACUSE. Mr. W. W. Baldwin, Chimes Bldg., 109 W. Onondaga Street.

GLENS FALLS INDEMNITY COMPANY

NEW YORK CITY. Mr. P. E. Brouillet, 84 William St.

GLENS FALLS (Home Office). Mr. W. R. Safford, Insurance Bldg.

GLENS FALLS (Local). Mr. H. F. Churchill, Insurance Bldg.

ALBANY. Mr. E. F. McKie, 42 Howard St.

BUFFALO. Mr. J. H. Disher, Ellicott Square Bldg.

ROCHESTER. Mr. W. D. Williams, 45 Exchange Street.

SYRACUSE. Mr. Jos. Farranto, O. C. S. Bank Bldg.

MINEOLA, LONG ISLAND. Mr. J. C. Hartman, 1551 Franklin Avenue.

PLATTSBURG. Mr. E. T. Griffiths, 57 Clinton Street.

POUGHKEEPSIE. Mr. H. S. Davidson, Bardavon Office Building.

GREAT AMERICAN INDEMNITY COMPANY

NEW YORK CITY. Mr. Thomas F. Meade, One Liberty Street.

ALBANY. Mr. Richard D. Seymour, 74 Chapel Street.

BUFFALO. Mr. Edwin F. Weis, 351 Ellicott Square Building.

SYRACUSE. Mr. Elmer J. Jacques, 331 Union Building.

JAMESTOWN MUTUAL INSURANCE COMPANY

JAMESTOWN (Home Office—No Branch Offices). Mr. C. W. Zahn, Claim Manager.

LONDON GUARANTEE & ACCIDENT CO., LTD.

PHOENIX INDEMNITY COMPANY

NEW YORK CITY. Mr. Wm. E. Lowther, General Counsel; Mr. William Schobinger, Mr. John F. Banschback, Mr. Wm. J. Kehoe, 55 Fifth Avenue.

ALBANY. Mr. E. L. Kane, 75 State Street.

BUFFALO. Mr. F. D. Maurin, Ellicott Square Building.

ROCHESTER. Mr. George E. Chase, 414 Main St., East.

SYRACUSE. Mr. R. C. Blair, Keith Theatre Building.

POUGHKEEPSIE. Mr. Gordon S. Mansfield, 3 Cannon Street.

ZURICH GENERAL ACCIDENT & LIABILITY INSURANCE CO., LTD.

NEW YORK CITY. Mr. Fred A. Zierleyn, Supt. Comp. Claim Dept., 80 John Street, New York City. (In the absence of the above party requests may be directed to Mr. M. Merkens or Mr. Frank Granger.)

BUFFALO. (Western Part of New York from Syracuse, and North of the New York State Line), Mr. Frank Pfalzer, 126 Pearl Street.

LUMBER MUTUAL CASUALTY INSURANCE Co.

NEW YORK CITY. Mr. Henry G. Mueller, Supt. of Claim Dept., 41 E. 42nd St. (Tel. Vanderbilt 3-4393.)

BUFFALO. Mr. Harold L. Zink, Branch Claim Manager, 220 Delaware Ave. (Tel. Lafayette 7304.)

SYRACUSE. Mr. J. R. Fitzgerald, Branch Claim Manager, 302 Hills Bldg. (Tel. Syracuse 3-7210.)

MARYLAND CASUALTY COMPANY

NEW YORK CITY. Mr. Otto Kaufmann, Mr. P. R. O'Keeffe, Mr. E. W. Buckland, Mr. A. T. Black, 60 John St.; Dr. Joseph W. Harris, Dr. Howard Stackhouse, Jr., 51 Maiden Lane.

ALBANY. Mr. F. W. Everett, 305 Standard Building.

SYRACUSE. Mr. B. E. Keicher, Mr. S. B. Coulter, 516 Loew Building.

ROCHESTER. Mr. J. R. Lannen, 45 Exchange Street.

NEWBURGH. Mr. F. F. Chamberlain, Van Cleft Building.

BUFFALO. Mr. M. C. Schaus, 725 M. & T. Building.

OLEAN. Mr. W. H. Curtis, 307 First National Bank Bldg.

MASSACHUSETTS BONDING & INSURANCE Co.

NEW YORK CITY. Mr. Charles N. Alvarez, Mgr., Comp. Claim Dept., 130 William Street.

BOSTON, MASS. (Home Office). Mr. H. W. Hovey, 20 Kilby St.

ALBANY. Mr. John A. Rudd, Adjuster, 90 State Street.

SYRACUSE. Mr. Frank B. Traub, Adjuster, White Memorial Building.

ROCHESTER. Mr. Gordon M. Berns, Adjuster, 201 Triangle Building.

BUFFALO. Mr. J. H. Crafts, Adjuster, 26 Dunn Building.

MUTUAL CASUALTY INSURANCE Co.

NEW YORK CITY (No Branch Offices). Mr. A. Joseph Ross, Secretary, 110 W. 40th Street.

UNITED STATES GUARANTEE COMPANY

NEW YORK CITY (No Branch Offices). Mr. Walter Hall, Attorney, 90 John Street.

U. S. FIDELITY & GUARANTEE Co.

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Medical News

Broome County

BINGHAMTON HOSPITALS and surgical methods were given a high rating by Dr Temple S Fay, professor of Neurological Surgery at Temple University's School of Medicine at the regular monthly meeting of the Broome County Medical Society in the Binghamton Club on Oct 1

Cattaraugus County

THE PAPERS by Dr Donald R McKay and Dr Raymond F Rosedale, on pneumoconiosis, at the October meeting of the Society Tuesday, the 8th, closed the series of lectures on silicosis and allied condition, given to the members of the Cattaraugus County Medical Society by members of the staff of the Buffalo City Hospital. The meeting was held in the Colonial Room of the Olean House, following dinner. Two new members were admitted.

Chautauqua County

THE REGULAR FALL meeting of the Chautauqua County Medical Society was held Sept 25 at Newton Memorial Hospital in Cassadaga. Forty were present for the dinner which preceded the technical discussion.

A paper on Surgery of the Gall Bladder was given by Dr Howard M Clute of Boston.

Dr T H Shinnahan of Jamestown presided.

Chemung County

THE FUNCTIONS of the county medical society were interestingly presented by Dr Joseph Lawrence, Executive Director of the State Society, at the October meeting of the Chemung County Medical Society at the Elmira City Club.

Cortland County

DR CHARLES D POST of Syracuse University was the guest speaker at the meeting of the Cortland County Medical Society on October 18.

Dutchess-Putnam Counties

DR ABRAHAM KAPLAN, neuro-surgeon of Mt Sinai Hospital, New York, addressed the Dutchess-Putnam Medical Society in Poughkeepsie on Nov 13 at the Amrita Club, on "The Diagnosis of Operable Intracranial Lesions."

Essex County

AT A RECENT MEETING of the Essex County Medical Society at Moses Ludington Hospital, Ticonderoga, Dr J A Gers of Lake Placid was elected president, Dr John Breen of Schroon Lake vice president, and Dr L H Grus of Ticonderoga, secretary treasurer.

A scientific program was presented with papers by Dr Waite and Dr H J Harris of Westport on 'Undulant Fever'. Following the meeting a luncheon was served.

Franklin County

THE ANNUAL MEETING of the Medical Society of the County of Franklin was held at the Alice Hyde Memorial Hospital, Malone, October 23. Luncheon was served in Hotel Flanagan. The following officers were elected for 1936: President Dr E N Packard, Vice Pres, Dr Daisy H Van Dyke, Sec-Treas, Dr G F Zimmerman, Censor for three years, Dr E M Austin, Delegate to N Y State Meeting, Dr C C Trembley, Alternate, Dr J E White.

It was voted that four meetings be held each year, in February, May, August and November. Committees were appointed to review qualifications for compensation work.

Fulton County

DR ELDRIDGE H CAMPBELL of Albany, formerly of the Johns Hopkins Hospital in Baltimore, was the principal speaker at the meeting of the Fulton County Medical Society on October 17 in Johnstown. His topic was "Early Diagnosis of Brain Tumors."

Genesee County

ELIMINATION OF THE SERVICES of the city physician and surgeon and division of the relief work among all the physicians of the city was proposed at a meeting of the Genesee County Medical Society on Oct 1 at the Hotel Richmond in Batavia. A committee was appointed to confer with the Common Council regarding the proposal which would enable those on relief to call their family physicians, the cost to be paid from city, state and Federal funds.

Kings County

INTERESTING PAPERS on pulmonary tuberculosis were presented before the Kings County Medical Society at its headquarters on Bedford Ave on Oct 15, by Dr E J

O'Brien of Detroit and Dr. Foster Murray of the Kingston Ave. Hospital.

Monroe County

MORE AGGRESSIVE health legislation, better enforcement and public education are necessary to curtail blindness, Dr. Harry S. Gradle of Chicago, chief of staff of the Illinois Eye and Ear Infirmary, told the Monroe County Medical Society on Oct. 15 at the Rochester Academy of Medicine.

Montgomery County

THE MEDICAL SOCIETY of the County of Montgomery and the staffs of St. Mary's Hospital and the Amsterdam City Hospital met on Oct. 30 in St. Mary's Hospital at Amsterdam. Dr. William R. Rathbun, Canajoharie, president of the society, presided and Dr. P. J. Fitzgibbons, president of St. Mary's Hospital staff and Dr. R. J. Knapp, president of the City Hospital staff, presided for their staffs.

Addresses were given by Dr. E. K. Cravener of Schenectady and Dr. H. Jackson Davis, director of medical care for the TERA.

Nassau County

THE NASSAU AND WESTCHESTER County Medical Societies held a joint dinner-meeting at the North Hempstead Country Club at Port Washington on Oct. 29.

New York County

AN ATTACK by Dr. Simon Flexner on the Kolmer and Brodie-Park vaccines for infantile paralysis appeared in the November issue of *Science*, and was played up prominently in the New York papers. The virus in the vaccines "is either inactivated (destroyed) or merely reduced in concentration," said Dr. Flexner. "When the virus is actually destroyed, it no longer possesses immunizing power; when it is reduced in concentration, it immunizes certain animals and may paralyze others."

In reply Dr. Park is quoted as saying: "Our virus may be living but it has been so reduced in activity that it never produces the disease when introduced into a patient. The child never becomes paralyzed. There is no question that Dr. Brodie gets immunity in the blood of the children he treats. Whether or not that is sufficient immunity we don't know."

Dr. Brodie is quoted as saying that he himself and about 10,000 children have received the vaccine and not one so treated has had infantile paralysis.

Onondaga County

THE PROBLEM now being attacked by Dr. George H. Whipple, of the College of Medicine of Rochester University, is to determine the manner in which the human body manufactures its red blood corpuscles. So he told 150 physicians at Syracuse on Oct. 17, at a joint meeting of the Rochester and Syracuse Academies of Medicine. His subject was "Problems of Anemia," and he revealed that in his work with Drs. Murphy and Minot which brought them the Nobel Prize, he did the laboratory work in California and Rochester while the others worked in the clinic in Boston. They kept each other posted on developments by correspondence.

Ontario County

DR. WALTER S. THOMAS, of Clifton Springs, was elected to head the Ontario County Medical Society at the annual meeting on Oct. 8th in Wenna Kenna tea room, east shore of Canandaigua Lake. He succeeds Dr. Albert M. Crane, of Geneva, who presided at the sessions.

In place of Dr. Thomas, Dr. C. W. Grove, of Geneva, was named vice-president, and Dr. D. A. Eiseline, of Shortsville, was elected secretary and treasurer for the 39th consecutive year. Members of the board of censors hold over until 1936, together with Dr. H. J. Knickerbocker, of Geneva, delegate to the annual convention of the State Medical Society next Spring. Dr. C. C. Lytle, of Geneva, was named alternate delegate in place of Dr. C. W. Selover, past president of the society, who died last July. About fifty attended the dinner and meeting.

Orange County

BECAUSE OF THE amazing growth in attendance at the free clinics at St. Luke's Hospital in Newburgh, physicians who have been donating their services have filed with the City and Town Home Commissioners a request that they receive compensation from public welfare funds at the rate of 50 cents per case. The hospital has also filed a request for compensation for X-rays taken in connection with the clinic.

Otsego County

GREATER COOPERATION between physicians and attorneys was urged by Willard Pratt, Utica attorney, at a joint meeting of the Otsego County Bar and Otsego County Medical associations at Hotel Oneonta on Oct. 16. Miss Marjory Murray of Coopers-town, president of the county medical association, represented that group at the speakers' table. Over one hundred attended.

Queens County

THE QUEENS COUNTY MEDICAL SOCIETY and the Queensboro Tuberculosis and Health Society learned from Hospital Commissioner S. S. Goldwater at a joint meeting a few weeks ago his plan to save New York city's 116 private hospitals from financial ruin. Under his plan, the labor unions would buy hospitalization either through annual contributions or through additional dues levied on their members. A similar plan has been successful in London.

THE QUEENS COUNTY Medical Society has pledged full cooperation in the proposed world's fair to be held in Queens in 1939, and has offered to "place its facilities at the Committee's disposal to co-ordinate other County Societies, the New York State Medical Society, The American Medical Association and the New York Academy of Medicine in planning exhibits pertaining to medicine and arranging for the reception and registration of visiting members of the profession."

Schenectady County

THE SCHENECTADY COUNTY MEDICAL SOCIETY observed the 125th anniversary of its founding on Oct. 12 with a dinner at the Mohawk Golf Club. Approximately 120 attended with members of societies from adjacent counties, the Schenectady County Dental Association, the Schenectady County Historical Society and several other distinguished persons present. Dr. Edward B. O'Keefe, president of the county medical group, presided and Dr. Dayton L. Kathan was toastmaster.

Interesting addresses were made by Dr. Dixon Ryan Fox, president of Union College, Dr. W. D. Coolidge, director of research at the General Electric Company, Dr. Francis C. Packard of Philadelphia, Dr. Ellis Kellert, Dr. Roy C. Keigher, and Dr. J. Eastman Sheehan.

The historical medical exhibit attracted great interest.

Seneca County

THE REGULAR ANNUAL MEETING of the Seneca County Medical Society took place at the Willard State Hospital, Willard, on October 10. Routine work occupied the morning, and after the luncheon Dr. John J. Lloyd of Rochester, N. Y., gave a talk with lantern slides on the "Treatment of Respiratory Diseases", and Dr. Ross E. Herold of the Willard State Hospital Staff gave a paper on the subject of "Melano Sarcoma in a Negro," followed by a series of unusual x-ray plates.

Warren County

FIFTY MEMBERS attended the annual banquet meeting of the Warren County Medical Society on Sept. 30 at Glens Falls. Officers were re-elected and an address was presented by Dr. Frederick E. Sondern of New York City, president of the Medical Society of the State of New York.

The officers re-elected are: President, Dr. Leonard A. Hulsebosch of Glens Falls; vice-president, Dr. George Bibby of Pottersville; secretary-treasurer, Dr. Morris Maslon of Glens Falls; board of censors, Dr. James B. Shields, Dr. B. J. Singleton and Dr. Herbert A. Bartholomew, all of Glens Falls; delegate to the Medical Society of the State of New York, Dr. Maslon; alternate delegate, Dr. H. E. Clarke.

Washington County

THE MEDICAL SOCIETY of the County of Washington, at its annual meeting at Hudson Falls on Oct. 1, elected these officers: President, E. V. Farrell; vice-president, J. H. Ring; secretary, S. J. Banker; treasurer, C. A. Prescott; board of censors, G. M. Casey, chairman, B. C. Tillotson, R. E. LaGrange; committee on legislation, W. A. Leonard, chairman; committee on public relations and medical economics, M. A. Rogers, chairman.

Papers of great interest were presented by Drs. French, Mezey and Stanton and by the President of the Society. Dinner was served at the Carleton Hotel. Twenty-nine members and visitors were present.

Westchester County

FOR THE FIFTH TIME in six years Yonkers has been given honorable mention in the National Health Contest conducted by the United States Chamber of Commerce as being one of the five cities between 100,000 and 500,000 population showing the greatest progress in health work. A plaque has been received by the department with a letter from the President of the Chamber of Commerce commending the work in Yonkers. Yonkers is rated among the first five cities in its population class in 1929, 1930, 1931 and 1932. It failed to qualify by a narrow margin in 1933 but has once more entered the qualifying group. The credit is generally accorded to the late Dr. Clarence W. Buckmaster, City Health Commissioner, who died on Oct. 7.

DR. CLAUDE W. MUNGER, Director of Grasslands Hospital, was elected President-Elect of the American Hospital Association at the recent annual convention of the association in St. Louis. Dr. Munger will take office as President in 1936.

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NEWARK, N. J. Mr. L. O. Heiden, Claim Manager; Mr. James Inglis, Compensation Examiner, Lefcourt Building, Raymond Boulevard at Broad St.

BUFFALO. Mr. W. M. Conner, Resident Adjuster, Rand Building, 14 Lafayette Square.

THE FIDELITY & CASUALTY COMPANY

NEW YORK CITY (Home Office). Dr. J. Hudson Blauvelt, 80 Maiden Lane.

METROPOLITAN CASUALTY INSURANCE CO. OF NEW YORK

NEWARK, N. J. (Home Office). Mr. Henry C. Balogh, 10 Park Place.

NEW YORK CITY. Mr. Charles V. Flanagan, 128 William Street.

ALBANY. Mr. J. C. Morrison, 75 State Street.

BUFFALO. Mr. Mark L. Pauly, 603 White Building.

ROCHESTER. Mr. Alfred C. Hardy, Lincoln Alliance Bank Building.

(AMERICAN) LUMBERMENS MUTUAL CAS. CO. OF ILLINOIS

CHICAGO, ILL. (Home Office). Mr. R. E. Howe, 2nd Vice-Pres., Mutual Insurance Bldg.

NEW YORK CITY. Mr. J. S. Gifford, 88 Lexington Avenue.

ALBANY. Mr. Frank T. Leone, Home Savings Bank Building.

BINGHAMTON. Mr. N. E. Robinson, 538 Security Mutual Life Building.

BUFFALO. Mr. J. E. O'Brien, 983 Ellicott Square Building.

NEWBURGH. Mr. H. T. Bateman, Van Cleft Building.

ROCHESTER. Mr. L. H. Reynolds, Reynolds Arcade Building.

SYRACUSE. Mr. G. M. Butters, Syracuse Building.

EXCHANGE MUTUAL INDEMNITY INS. CO.

NEW YORK CITY. Mr. Paul O. Hastings, 611 Chrysler Building, 405 Lexington Avenue. (Tel. Vanderbilt 3-9297.)

ALBANY. Mr. A. A. Ruslander, 306 Broadway Arcade Building. (Tel. 3-6397.)

BUFFALO (Home Office). Mr. B. H. Rathmann, Mr. E. F. Heltzel, 531 Delaware Avenue. (Tel. Grant 8970.)

SYRACUSE. Mr. Frank T. Sheridan, 504-506 Dillaye Memorial Building. (Tel. 2-6185.)

ROCHESTER. Mr. L. W. Van Vechten, 84 Exchange Street. (Tel. Main 3146.)

Medical News

Broome County

BINGHAMTON HOSPITALS and surgical methods were given a high rating by Dr Temple S Fay, professor of Neurological Surgery at Temple University's School of Medicine at the regular monthly meeting of the Broome County Medical Society in the Binghamton Club on Oct 1

Cattaraugus County

THE PAPERS by Dr Donald R McKay and Dr Raymond F. Rosedale, on pneumoconiosis, at the October meeting of the Society, Tuesday, the 8th, closed the series of lectures on silicosis and allied condition, given to the members of the Cattaraugus County Medical Society by members of the staff of the Buffalo City Hospital. The meeting was held in the Colonial Room of the Olean House, following dinner. Two new members were admitted.

Chautauqua County

THE REGULAR FALL meeting of the Chautauqua County Medical Society was held Sept 25 at Newton Memorial Hospital in Cassadaga. Forty were present for the dinner which preceded the technical discussion.

A paper on Surgery of the Gall Bladder was given by Dr. Howard M. Clute of Boston.

Dr T. H. Shanahan of Jamestown presided.

Chemung County

THE FUNCTIONS of the county medical society were interestingly presented by Dr Joseph Lawrence, Executive Director of the State Society, at the October meeting of the Chemung County Medical Society at the Elmira City Club.

Cortland County

DR CHARLES D. POST of Syracuse University was the guest speaker at the meeting of the Cortland County Medical Society on October 18.

Dutchess-Putnam Counties

DR ABRAHAM KAPLAN, neuro surgeon of Mt Sinai Hospital, New York addressed the Dutchess-Putnam Medical Society in Poughkeepsie, on Nov 13 at the Amrita Club, on "The Diagnosis of Operable Intracranial Lesions."

Essex County

AT A RECENT MEETING of the Essex County Medical Society at Moses-Ludington Hospital, Ticonderoga, Dr. J. A. Geis of Lake Placid was elected president; Dr John Breen of Schroon Lake, vice president, and Dr. L. H. Gaus of Ticonderoga, secretary-treasurer.

A scientific program was presented with papers by Dr. Waite and Dr. H. J. Harris of Westport on "Undulant Fever." Following the meeting a luncheon was served.

Franklin County

THE ANNUAL MEETING of the Medical Society of the County of Franklin was held at the Alice Hyde Memorial Hospital, Malone, October 23. Luncheon was served in Hotel Flanagan. The following officers were elected for 1936: President, Dr. F. N. Packard, Vice-Pres., Dr. D. S. H. Van Dyke, Sec-Treas., Dr. G. F. Zimmerman, Censor for three years, Dr. E. M. Austin, Delegate to N. Y. State Meeting, Dr. C. C. Trembley, Alternate, Dr. J. E. White.

It was voted that four meetings be held each year, in February, May, August and November. Committees were appointed to review qualifications for compensation work.

Fulton County

DR EDWIN H. CAMPBELL of Albany, formerly of the Johns Hopkins Hospital in Baltimore, was the principal speaker at the meeting of the Fulton County Medical Society on October 17 in Johnstown. His topic was "Early Diagnosis of Brain Tumors."

Genesee County

ELIMINATION OF THE SERVICES of the city physician and surgeon and division of the relief work among all the physicians of the city was proposed at a meeting of the Genesee County Medical Society on Oct 1 at the Hotel Richmond in Batavia. A committee was appointed to confer with the Common Council regarding the proposal, which would enable those on relief to call their family physicians, the cost to be paid from city, state and Federal funds.

Kings County

INTERESTING PAPERS on pulmonary tuberculosis were presented before the Kings County Medical Society at its headquarters on Bedford Ave on Oct 15, by Dr. E. J.

O'Brien of Detroit and Dr. Foster Murray of the Kingston Ave. Hospital.

Monroe County

MORE AGGRESSIVE health legislation, better enforcement and public education are necessary to curtail blindness, Dr. Harry S. Gradle of Chicago, chief of staff of the Illinois Eye and Ear Infirmary, told the Monroe County Medical Society on Oct. 15 at the Rochester Academy of Medicine.

Montgomery County

THE MEDICAL SOCIETY of the County of Montgomery and the staffs of St. Mary's Hospital and the Amsterdam City Hospital met on Oct. 30 in St. Mary's Hospital at Amsterdam. Dr. William R. Rathbun, Canajoharie, president of the society, presided and Dr. P. J. Fitzgibbons, president of St. Mary's Hospital staff and Dr. R. J. Knapp, president of the City Hospital staff, presided for their staffs.

Addresses were given by Dr. E. K. Cravener of Schenectady and Dr. H. Jackson Davis, director of medical care for the TERA.

Nassau County

THE NASSAU AND WESTCHESTER County Medical Societies held a joint dinner-meeting at the North Hempstead Country Club at Port Washington on Oct. 29.

New York County

AN ATTACK by Dr. Simon Flexner on the Kolmer and Brodie-Park vaccines for infantile paralysis appeared in the November issue of *Science*, and was played up prominently in the New York papers. The virus in the vaccines "is either inactivated (destroyed) or merely reduced in concentration," said Dr. Flexner. "When the virus is actually destroyed, it no longer possesses immunizing power; when it is reduced in concentration, it immunizes certain animals and may paralyze others."

In reply Dr. Park is quoted as saying: "Our virus may be living but it has been so reduced in activity that it never produces the disease when introduced into a patient. The child never becomes paralyzed. There is no question that Dr. Brodie gets immunity in the blood of the children he treats. Whether or not that is sufficient immunity we don't know."

Dr. Brodie is quoted as saying that he himself and about 10,000 children have received the vaccine and not one so treated has had infantile paralysis.

Onondaga County

THE PROBLEM now being attacked by Dr. George H. Whipple, of the College of Medicine of Rochester University, is to determine the manner in which the human body manufactures its red blood corpuscles. So he told 150 physicians at Syracuse on Oct. 17, at a joint meeting of the Rochester and Syracuse Academies of Medicine. His subject was "Problems of Anemia," and he revealed that in his work with Drs. Murphy and Minot which brought them the Nobel Prize, he did the laboratory work in California and Rochester while the others worked in the clinic in Boston. They kept each other posted on developments by correspondence.

Ontario County

DR. WALTER S. THOMAS, of Clifton Springs, was elected to head the Ontario County Medical Society at the annual meeting on Oct. 8th in Wenna Kenna tea room, east shore of Canandaigua Lake. He succeeds Dr. Albert M. Crane, of Geneva, who presided at the sessions.

In place of Dr. Thomas, Dr. C. W. Grove, of Geneva, was named vice-president, and Dr. D. A. Eiseline, of Shortsville, was elected secretary and treasurer for the 39th consecutive year. Members of the board of censors hold over until 1936, together with Dr. H. J. Knickerbocker, of Geneva, delegate to the annual convention of the State Medical Society next Spring. Dr. C. C. Lytle, of Geneva, was named alternate delegate in place of Dr. C. W. Selover, past president of the society, who died last July. About fifty attended the dinner and meeting.

Orange County

BECAUSE OF THE amazing growth in attendance at the free clinics at St. Luke's Hospital in Newburgh, physicians who have been donating their services have filed with the City and Town Home Commissioners a request that they receive compensation from public welfare funds at the rate of 50 cents per case. The hospital has also filed a request for compensation for X-rays taken in connection with the clinic.

Otsego County

GREATER COOPERATION between physicians and attorneys was urged by Willard Pratt, Utica attorney, at a joint meeting of the Otsego County Bar and Otsego County Medical associations at Hotel Oneonta on Oct. 16. Miss Marjory Murray of Coopers-town, president of the county medical association, represented that group at the speakers' table. Over one hundred attended.

Queens County

THE QUEENS COUNTY MEDICAL SOCIETY and the Queensboro Tuberculosis and Health Society learned from Hospital Commissioner S. S. Goldwater at a joint meeting a few weeks ago his plan to save New York city's 116 private hospitals from financial ruin. Under his plan, the labor unions would buy hospitalization either through annual contributions or through additional dues levied on their members. A similar plan has been successful in London.

THE QUEENS COUNTY Medical Society has pledged full cooperation in the proposed world's fair to be held in Queens in 1939, and has offered to "place its facilities at the Committee's disposal to co-ordinate other County Societies, the New York State Medical Society, The American Medical Association and the New York Academy of Medicine in planning exhibits pertaining to medicine and arranging for the reception and registration of visiting members of the profession."

Schenectady County

THE SCHENECTADY COUNTY MEDICAL SOCIETY observed the 125th anniversary of its founding on Oct. 12 with a dinner at the Mohawk Golf Club. Approximately 120 attended with members of societies from adjacent counties, the Schenectady County Dental Association, the Schenectady County Historical Society and several other distinguished persons present. Dr. Edward B. O'Keefe, president of the county medical group, presided and Dr. Dayton L. Kathan was toastmaster.

Interesting addresses were made by Dr. Dixon Ryan Fox, president of Union College, Dr. W. D. Coolidge, director of research at the General Electric Company, Dr. Francis C. Packard of Philadelphia, Dr. Ellis Kellert, Dr. Roy C. Keigher, and Dr. J. Eastman Sheehan.

The historical medical exhibit attracted great interest.

Seneca County

THE REGULAR ANNUAL MEETING of the Seneca County Medical Society took place at the Willard State Hospital, Willard, on October 10. Routine work occupied the morning, and after the luncheon Dr. John J. Lloyd of Rochester, N. Y., gave a talk with lantern slides on the "Treatment of Respiratory Diseases", and Dr. Ross F. Herold of the Willard State Hospital Staff gave a paper on the subject of "Melano Sarcoma in a Negro," followed by a series of unusual x-ray plates.

Warren County

FIFTY MEMBERS attended the annual banquet meeting of the Warren County Medical Society on Sept. 30 at Glens Falls. Officers were re-elected and an address was presented by Dr. Frederick E. Sondern of New York City, president of the Medical Society of the State of New York.

The officers re-elected are: President, Dr. Leonard A. Hulsebosch of Glens Falls; vice-president, Dr. George Bibby of Pottersville; secretary-treasurer, Dr. Morris Maslon of Glens Falls; board of censors, Dr. James B. Shields, Dr. B. J. Singleton and Dr. Herbert A. Bartholomew, all of Glens Falls; delegate to the Medical Society of the State of New York, Dr. Maslon; alternate delegate, Dr. H. E. Clarke.

Washington County

THE MEDICAL SOCIETY of the County of Washington, at its annual meeting at Hudson Falls on Oct. 1, elected these officers: President, E. V. Farrell; vice-president, J. H. Ring; secretary, S. J. Banker; treasurer, C. A. Prescott; board of censors, G. M. Casey, chairman, B. C. Tillotson, R. E. LaGrange; committee on legislation, W. A. Leonard, chairman; committee on public relations and medical economics, M. A. Rogers, chairman.

Papers of great interest were presented by Drs. French, Mezey and Stanton and by the President of the Society. Dinner was served at the Carleton Hotel. Twenty-nine members and visitors were present.

Westchester County

FOR THE FIFTH TIME in six years Yonkers has been given honorable mention in the National Health Contest conducted by the United States Chamber of Commerce as being one of the five cities between 100,000 and 500,000 population showing the greatest progress in health work. A plaque has been received by the department with a letter from the President of the Chamber of Commerce commending the work in Yonkers. Yonkers is rated among the first five cities in its population class in 1929, 1930, 1931 and 1932. It failed to qualify by a narrow margin in 1933 but has once more entered the qualifying group. The credit is generally accorded to the late Dr. Clarence W. Buckmaster, City Health Commissioner, who died on Oct. 7.

DR. CLAUDE W. MUNGER, Director of Grasslands Hospital, was elected President-Elect of the American Hospital Association at the recent annual convention of the association in St. Louis. Dr. Munger will take office as President in 1936.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

Responsibility of Physician for Negligence of Another Physician

The responsibility of a physician and surgeon for negligent after care rendered a patient by another physician who takes over the case from the first physician was the subject of litigation which came before the Courts some time ago in one of the Western States.* The ruling is one which clearly determines the legal consequences in a situation which frequently arises in the everyday practice of medical practitioners.

The fact situation was a simple one. Mrs. H., who lived in a small town, was suffering from a certain abdominal ailment which required a surgical operation. She made the acquaintance of a medical student with whom she discussed her complaints, and he referred her to a surgeon in a nearby city, Dr. N. The medical student made arrangements with Dr. N. by telephone whereby the doctor was to come to a hospital located some distance from where he practiced, and perform the operation. This was done, and from all that appeared upon the trial of the case the operation was performed with complete success. Another surgeon of ability was present at the operation and was in a position to give testimony that it was in all respects skillfully performed. A physician interning at the hospital was also present at the operation. In finishing up the operation the surgeon found it necessary to leave a gauze drain in the incision, which of course was to be removed later. At the completion of the operation because Dr. N., the surgeon was unable to remain in the city where the hospital was situated, he made arrangements with the interne to look after the patient, dress the wound, and generally to care for her until she recovered. The interne assumed those duties but failed to remove the gauze drain at the proper time, according to the testimony. The surgeon never saw the patient after the operation.

An action was brought against the surgeon by the patient and her husband, charging him with malpractice on the theory that he was responsible for the negligence of the younger doctor who took over the case. Upon the trial there was no proof that Dr. N. made any arrangements with the interne whereby he, Dr. N., was to pay him for his services. There also was no proof that

Dr. N. was guilty of any negligence in the selection of the interne as a proper person to look after the patient, and to remove the gauze at the appropriate time. So far as appeared the interne was properly qualified to undertake all that he did in the case. Upon the trial the Court, over defendant's objection, instructed the jury that if Dr. N. employed the interne to take charge of the patient, for the purpose of dressing the wound, and removing the drain, and if the interne was guilty of negligence, the surgeon might be held liable, regardless of whether Dr. N. paid or undertook to pay him for his services.

There was a verdict in favor of the plaintiffs and the defendant took an appeal. The Appellate Court reversed the judgment of the trial Court. In support of its ruling reference was made to an earlier case where a similar situation had arisen. In that case a doctor had rendered temporary treatment for a dislocated arm, and having to leave the city, recommended that the patient go to another physician with whom he had made arrangements whereby the second doctor was to look after his patients in his absence. In that case it had been held that the first doctor could not be liable for the negligence of the second doctor, and the Court quoted from the opinion in that case as follows:

The employment of Dr. M. constituted an independent contract and Dr. K. is not responsible for his negligence or want of skill.

The Court drew a distinction in the situation from the ordinary relation of master and servant, citing the following:

A physician cannot be regarded as an agent or servant in the usual sense of the term, since he is not and necessarily cannot be directed in the diagnosing of diseases and injuries and prescribing treatment therefor, his office being to exercise his best skill and judgment in such matters without control from those by whom he is called or his fees are paid.

In determining to reverse the ruling of the lower Court, the Appellate Court said,

* * * it is clear that the instructions of the Court as to liability on the part of the defendant were erroneous. Appellant was not guilty of negligence in the performance of the operation, nor in the selection of a physician to continue the treatment after he left the city.

* Norton v. Hefner, 198 S. W. 97.

Not being negligent in those respects, he cannot be held responsible for the negligence of the other physician who was left in charge, merely because the other physician took charge on his suggestion and arrangement.

Reconstructive Operation on Knee

A young married woman came to a doctor specializing in orthopedic surgery, complaining of arthritis. On examination he found that she was suffering from ankylosis of the left knee, which had become permanently stiffened with bony infusum. He had an x-ray taken which confirmed his diagnosis. He suggested an operation for the purpose of attempting to improve the condition of her leg, to which she consented.

The doctor made a horse-shoe shaped incision under the patella, and then a straight incision from the middle down about three inches, cutting through deep fascia and the patella tendon, exposing the destroyed joint. He freed the patella from the femur and then with a chisel in the line of the new joint cut a V shaped line and removed enough bone to leave joint space. After this the doctor made an incision in the thigh and cut out a right angular piece of fascia and with this lined the opening for the new joint. He completed his operation and applied a cast.

The patient remained in the hospital and the doctor observed her condition daily. About five days after the operation he noticed that blood and serum was going through the gauze. He made a small opening through the cast in each side of the knee and dressed the wound and he continued his aftercare. Some time later he applied a Calliper knee brace. At about that time he undertook to bend the knee by manipulation but the patient did not cooperate and he was unable to get much motion.

The patient remained in the hospital about two months in all and when she left she was walking with a crutch and the brace. She returned to the doctor's office several times over a period of two additional months and on each of those occasions the doctor tried to limber up the stiff knee. The woman was a hysterical type of patient and would not cooperate, claiming that the pain was too great to permit manipulation of the limb.

When the doctor last saw her the wounds occasioned by the operation had fully healed but her knee was still stiffened. She was able to walk without a brace or crutch but she had very little actual improvement in her condition.

She subsequently brought an action against the doctor charging him with alleged malpractice, making the further claim that

subsequent to the operation he had violently assaulted her; said claim apparently being based on his attempts to manipulate the limb.

After the case had been dormant for some time a motion was made to dismiss the case for lack of prosecution and the plaintiff's attorney obtained permission from the court upon the argument of that motion to restore the case for an early trial. He failed to do so, however, and upon a subsequent application made on behalf of the defendant the case was finally dismissed.

Confusion of Prescriptions

A general practitioner was called to the home of a child about a year old and found him in bed suffering from otitis media and upper respiratory infection. In the course of his treatment he gave the patient two prescriptions to be filled, one calling for "Tincture Opil and Olive Oil—2 drams of each—instructions: 2 to 3 drops in ear two or three times a day"; and the other one, calling for "Elixir Luminol, 20 drops, 3 times a day internally." Subsequently thereto the child developed pneumonia and was taken to a hospital where he remained for about ten days under the care of another doctor and returned home in good condition and apparently cured. From what the doctor learned later it appeared that when the two prescriptions were taken to a druggist, the druggist compounded them properly but confused the labels so that the medicines were delivered to the parents of the child with instruction that the ear drops were to be taken internally and that the internal medicine was to be used as ear drops. Precisely what, if any, damages the druggist's mistake caused the child was impossible to ascertain.

An action was brought against the doctor and the druggist as co-defendants, charging them both with responsibility for the confusion of the prescriptions. A check up of the prescriptions showed that the doctor had made no mistake in writing them up. When the case was about to be reached for trial the plaintiff's attorney arranged with the attorney for the druggist to settle the case for a small sum and at the same time he made efforts to obtain an additional settlement of the matter from the doctor. Since the doctor insisted that he had made no mistake in the case no offer was made to contribute to the settlement on his behalf and finally the plaintiff's attorney consented to discontinue the matter as to the doctor, contenting himself with the small settlement which he had received from the druggist, thereby admitting he had no basis for his complaint against the doctor.

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A GOOD OLD FAMILY DOCTOR who went to his reward the other day had never used an automobile, but held loyally to the faithful horse and buggy. Perhaps he was antiquated, but as he jogged along he had time to give thought to his medical problems as he could not do if he were roaring away at sixty or sixty-five. A country doctor recently remarked: "I am not as good a doctor as I was in the horse and buggy days. Then, I had time to think of my last patient before getting to the next. Now sometimes I slow my car down to fifteen or twenty miles, trying to think, and, damme, I am forced off the road or honked at by others until I get mad. Then I drive like hell, just like the rest!"

WHY NOT MAKE a slight change in a familiar slogan and hang a new motto on the Christmas tree, reading "Safe-toy First." Loving parents who give their children air-rifles, motorcycles, toy swords and sharp instruments of all sorts sometimes blame heaven for the resulting accidents that blind, maim, or kill them. The National Safety Council reports that from the time children begin to walk alone more of them die from accidents than from any disease, and between the ages of three and eighteen, "no disease even approaches accidents in virulence." Physicians giving health talks may well include a paragraph on safe toys and safe play.

Making War Healthier

A "MEDICAL MIRACLE" is reported by the medical department of the Italian Army. The losses from sickness are said to be amazingly low. Vast provisions of medical and hospital supplies, with doctors and nurses, accompany the troops; the men receive injections against typhoid, paratyphoid and cholera; quinine is given regularly, and infected water areas are covered with petroleum.

This is strictly in line with the improvement shown in the figures for modern and former wars. Take a similar campaign of a century ago, when France sent an army of 58,000 to Santo Domingo, and 50,000 died of disease, or 86.2 per cent. The advance of medical science has made anything like that impossible today. In the

British campaign in South Africa in 1899-1902 only 3.6 per cent of the troops died of disease; in our Spanish-American War only 1.7 per cent of our men died of disease, and in the World War, despite the flu and pneumonia epidemic, the percentage in our forces was only 1.4.

In modern armies, in fact, many of the men have better food and clothing and better medical and dental care than they had at home, and their military service adds years to their lives, so that while war takes life with one hand, it gives with the other. And the credit side of the ledger is due entirely to the men of medical science.

A State Slipping Backward

IT IS AN AMAZING fact that while Mussolini's men are receiving injections to protect them from typhoid and cholera, one of our Pacific Coast states is suffering from a scourge of smallpox due entirely to popular hostility or indifference to vaccination. One-fifth of all smallpox cases in the United States in the first nine months of this year occurred in the State of Washington. The exact number was 1,014, or 1,014 more than necessary. Contrast Washington, and its 1,400,000 population, with an eastern city of 800,000 which has not had a single case of smallpox in six years, and you get the picture.

A medical journal in Seattle reports that the doctors encounter a stubborn hostility to vaccination among certain sects and cults, and a cold indifference in the general population which is hard to overcome. The situation has been growing worse for several years, with 288 smallpox cases reported in 1933, 580 in 1934, and 1,014 in nine months of 1935. Physicians, health officers, nurses, and public officials are now aroused to a vigorous campaign in which these figures will be used to drive the lesson home. And they can be just as useful in our own towns and cities to show what may happen if we relax our vigilance.

MENTAL EXAMINATIONS of automobile drivers, to eliminate the morons, is urged by a committee of the New York Academy of Medicine. True, that might have its advantages, but driving in solitude on the deserted roads would be rather lonely.

MEDICAL RADIO BROADCASTS

Dr. Morris Fishbein, editor of the *J.A.M.A.*, will speak on "Tuberculosis" on December 3, and on "Hunting Accidents" on December 10 in the series of broadcasts

of the American Medical Association on the National Broadcasting Company's blue network. The addresses are on Tuesdays, at 5 P.M. eastern standard time.

Books

RECEIVED

[Acknowledgment of all books received by the JOURNAL will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from this column will be made for review, as dictated by their merits, or in the interests of our readers.]

Individual Exercises Selected Exercises for Individual Conditions. By George T. Stafford, M.S., Harry B. DeCook, M.A. and Joseph L. Picard, M.S. Octavo of 111 pages, illustrated. New York, A. S. Barnes & Company. 1935. Paper, \$1.00.

Modern Home Medical Adviser. Your health and how to preserve it. Edited by Morris Fishbein, M.D. Quarto of 905 pages, illustrated. Garden City, Doubleday, Doran & Company. 1935. Cloth, \$9.50.

Diseases of the Thyroid Gland. By Arthur E. Hertzler, M.D. Third edition. Octavo of 348 pages, illustrated. St. Louis, The C. V. Mosby Company. 1935. Cloth, \$7.50.

A Textbook of Laboratory Diagnosis. With Clinical Applications for Practitioners and Students. By Edwin E. Osgood, M.D. Second edition. Octavo of 585 pages, illustrated. Philadelphia, P. Blakiston's Son & Co. 1935. Cloth, \$6.00.

REVIEWED

(For other reviews see pages 1189 and 1218)

Stammering and Allied Disorders. By C. S. Bluemel, M.D. Duodecimo of 182 pages. New York, Macmillan Co., 1935. Cloth, \$2.00.

The author presents a new theory of stammering based on the conditioned reflex in inhibition. There is a general description of the conditioned reflex. Speaking, reading, and writing are conditioned responses, being symbols which a child learns but does not inherit. Inhibition is a physiological stimulus which checks the conditioned reflex. The conflict between the conditioned reflex and the shock which produces the inhibition of the reflex may result in a great emotional upset.

There has long been recognized a relationship between shock and stammering. At first mutism occurs and then when speech is regained there is stammering. The stammering speech following mutism means that the inhibition has only been partial. The author denotes this as primary stammering and states that it is particularly noticeable in children because the conditioned reflex of speech is not fully established in childhood. The etiological factor he labels a conditioned or associative inhibition. In the secondary stage the patient becomes emotionally conditioned to words or persons and thus stammers all the more. He may develop symptoms such as abnormal respiration during speech, show great physical effort and frequently resort to synonyms to avoid the word to which he is conditioned. Males stammer four times more than females probably because they do not have as great a facility of speech.

Other theories for stammering such as visualization, handedness, and conflict are explained and then discarded by the author.

The treatment consists of rest, tranquilization, sedatives, and reinforcement of the

reflex unconditioning. The prognosis is good in primary stammering if treatment is begun early, but it is poor in the secondary type.

While one may not agree entirely with the viewpoint presented here, the reviewer feels that the book is of great value as it does attempt to explain the cause of stammering in broader concepts. It is also of help because of its optimistic point of view. The reviewer recommends it to the profession.

STANLEY S. LAMM

The Physical and Mental Growth of Prematurely Born Children. By Julius H. Hess, M.D. et al. Octavo of 449 pages. Chicago, University of Chicago Press, [c. 1934]. Cloth, \$5.00.

This book is divided into three parts. The first is a clinical study, the second is concerned with developmental studies of premature born children, and the third deals with special studies carried out in the premature infant station. The material studied includes 1,623 prematures either born in the Michael Reese Hospital or brought to it from a home or another hospital. The mortality of the transported group is higher. However, due to stress being placed on the maintenance of a normal temperature and the avoidance of chilling after birth and during transportation this mortality has been reduced from 53 per cent in the early years to 24.5 per cent in the group studied between 1930 to 1933. Multiple pregnancy was the most common single cause of premature labor. The next precipitating factor was toxemia of pregnancy. In the next group were syphilis and tuberculosis followed by such other factors as acute infections, systemic disease, and local conditions as placenta previa.

In their conclusions with respect to the

development of prematures the authors state that the premature group are able to sit unsupported at as early an age as the sibling group, but are slightly delayed in walking. The earliest developmental habits and feeding show no difference. Similarly for teething. The onset of speech is similar but stuttering was noticed more frequently in the prematures.

There are special subjects studies with reference to the premature group such as a survey of the infants surviving a weight of less than a thousand grams, intracranial hemorrhage, and other topics.

The authors have attempted to answer such questions as the ultimate outlook for prematures, the comparison of morbidity and mortality in early childhood between prematures and those born full time, and finally the physical and mental status of those prematures who survive. The data is well arranged through a profuse use of charts and tables. It is a comprehensive survey of prematurity, and should be of interest to the profession.

STANLEY S. LAMM

A Brief Outline of Modern Treatment of Fractures. By H. Waldo Spiers, M.D. Octavo of 129 pages, illustrated. Baltimore, William Wood & Co., 1935. Cloth, \$2.00.

This little book of 125 pages is just what its title implies. It is well arranged into 13 chapters, each dealing with one type of fracture. The script is, of necessity, brief on each phase of fracture work but it is complete enough to give a good general idea of the procedure described.

The work should be in the hands of each intern on a given fracture service and it would be a fine handbook for nurses who are in care of such cases. As a ready reference work for the general practitioner it will find a wide field of usefulness in helping him to treat the fracture patient in the most modern manner and it will guide him away from some of the old, and pernicious, methods which lead to future trouble for the patient and surgeon if the case becomes hospitalized.

H. WRIGHT BENOIT

Industrial Medicine. By W. Irving Clark, M.D. & Philip Drinker, S.B. Edited by Morris Fishbein, M.D. Duodecimo of 262 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

This monograph on Industrial Medicine, is a most valuable and welcome contribution. Dr. W. Irving Clark and Dr. Philip Drinker are both known for their outstanding work in Industrial Medicine.

The first chapter on Industrial Medicine Department, will be found to be of great interest by those interested in the subject

and particularly by the medical directors of industrial plants.

The first four chapters of the book are given over to discussion of general matters in relation to industrial medicine, which will interest every practitioner who works in an industrial community.

The authors then go on to discuss the subjects of Pneumoconiosis, Lead Poisoning, Metal Fume Fever, Industrial Dermatoses, Gases, Benzol, Asphyxia and Artificial Respiration.

In the last chapters, they discuss the Prevention of Industrial Diseases.

The book is illustrated sufficiently to bring to the attention of the reader the important differential points in diagnosis, especially so in the chapters on Pneumoconiosis.

The Bibliography is excellent and completes a splendid monograph on the subject of Industrial Medicine.

IRVING GRAY

Obstetrics for the General Practitioner. By J. P. Greenhill, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 304 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

A small handy size volume devoted to the practical aspects of obstetrics. Written for the general practitioner it is simple, plain and to the point. No space is wasted on academic discussion with which the average man is not concerned. Descriptions of operative shortcuts are missing. A boiled down DeLee, it reflects the personal experience of Greenhill, who is always very practical. A remarkably good book which should serve its purpose well. The reviewer has never seen a better one.

CHARLES A. GORDON

A Manual of Obstetrical and Gynaecological Pathology. By John H. Teacher, M.D. Octavo of 407 pages, illustrated. New York, Oxford University Press, 1935. Cloth, \$15.25.

Professor Teacher realized the dire need of a comprehensive manual in English, covering all phases of obstetrical and gynecological pathology; but unfortunately during the process of writing the book Dr. Teacher died before he had completed it. The unfinished portion, however, has been written by a well known group of men and women who are well versed in the pathology of obstetrics and gynecology.

The result is this manual, which is by far the best book of its kind in the English language. In it all phases of obstetrical and gynecological pathology are thoroughly reviewed. The chapters on diseases of the endometrium, the early development of the ovum, and malignant tumors of the uterus are the most outstanding chapters in the book for their completeness.

The book is profusely illustrated with excellent photographs of both gross material and microscopic sections. The few colored plates in the book are excellently reproduced.

This book is a welcome addition to the literature and is highly recommended to all men interested in obstetrics and gynecology.

MORRIS GLASS

Diseases of Children. Third edition with contributions by 36 authors, edited by Hugh Thursfield, D.M., and Donald Paterson, M.D. First edition by Sir A. E. Garrod, D.M., the late Frederick E. Batten, M.D., and Hugh Thursfield, D.M. Octavo of 1152 pages. Baltimore, William Wood & Co., 1934, Cloth, \$10.00.

This edition of Garrod, Batten and Thursfield, edited by Thursfield and Paterson maintains its position as probably the best written pediatric text book in the English language. The facts are always interestingly presented for they are not hitched end to end in the almanac style so characteristic of medical text books. The material covered is enormous, so that even the most rare conditions are comprehensively discussed. The chapters on nervous conditions are especially fine.

These authors have the knack of presenting the extraordinary and critical points which must usually be unearthed in large systems or in a multitude of periodicals. A noticeable departure which will please American pediatricists is the somewhat belated recognition accorded the many excellent American and other foreign pediatric researches in the splendid bibliographies appended to each section. The recommendations for treatment are unusually clear and useful in a practical way.

All in all, we believe this to be the best single volume reference book in pediatrics.

CHARLES A. WEYMULLER

Diabetic Manual for Patients. By Henry J. John, M.D. Second Edition. Duodecimo of 232 pages. St. Louis, C. V. Mosby, 1934. Cloth, \$2.00.

The chief changes in this second edition consist in liberalizing the diets. These prescribe more fat and less carbohydrate per calorie than customary in recent times.

The cause and definition of Diabetes Mellitus is arbitrarily given as due to the pancreatic islands alone. No mention of extra pancreatic causes for Diabetes Mellitus is made.

The dramatic comparison of the effects of the pre to post insulin therapy is capably presented. The more that diabetics learn to know their abnormal physiology through such books as this, the longer and better lives they will have.

DAVID GLUSKER

The Management of Colitis. By J. Arnold Barga, M.D. Edited by Morris Fishbein, M.D. Duodecimo of 234 pages, illustrated. New York, National Medical Book Company, Inc., 1935. Cloth, \$4.00.

Half of the volume of 225 pages deals with the research work previously published from the Mayo Clinic on Chronic Ulcerative Colitis. The supposed etiological agent, the diplo-streptococcus of Ulcerative Colitis, is emphasized, and the history, pathology, diagnosis, complications and treatment, are discussed from this angle.

Amebic, tuberculous, and so called Mucous Colitis, are presented in detail. Bacillary Dysentery is barely mentioned, although the general practitioner would certainly welcome guidance in the management of this disease.

WILLIAM Z. FRADKIN

A Diabetic Manual for the Mutual Use of Doctor and Patient. By Elliott P. Joslin, M.D. Fifth Edition. Octavo of 224 pages, illustrated. Philadelphia, Lea & Febiger, 1934. Cloth, \$2.00.

Doctor Joslin is the veteran writer of manuals for the diabetic. His first manual was the progenitor of many that have been written by other hands, and his latest one surpasses all of his previous ones. He has never swerved from his original purpose of writing a manual for the education and instruction of the patient, and while it would serve the physician the point of view was taken entirely with the patient himself as a guide; his needs of fact, symptoms, and details of taking over the management of his life. The latest member of his family of manuals, gives more of hope and enthusiasm, more of actual fact, (for the diabetic children of his early books have grown and married) than any of the earlier ones, and consequently they become the examples of what he wants to say, and impress the diabetic with the fact that diet and insulin and care enable him to go on very much as any other individual except for his regime. As to this it also here is drawn with greater freedom than formerly, so that the diabetic can carry on as well with very much less of irksome detail of diet and arithmetic. In this manual are included very much more definite words as to the relation of the diabetic and marriage, and also the factor of heredity, which are based on later studies. There is no doubt but that if the diabetic is given the choice, he would choose this manual, and the physician will find in it, all of the facts he needs to properly lead his patients in the safest way for them to travel.

LOUIS C. JOHNSON

GENETICS AND CLINICAL MEDICINEGEORGE DRAPER, M.D., *New York City*

In a previous paper¹ emphasis was laid upon the school of biological thought which considers the organism to be greater than its parts, and the effort was made to bring this attitude into relation with clinical medicine. It was shown that the physician was faced with the difficult task of knowing the total individuality of the man within the patient, or, as Samuel Butler² phrased it, "his personal identity."

Butler's remarks on the subject of personal identity in relation to heredity and the organismal concept are so excellent that I shall quote in full the passage which deals with it:

For surely all reasonable people will feel that an infant an hour before birth, when in the eye of the law he has no existence and could not be called a peer for another sixty minutes, though his father was a peer and already dead—surely such an embryo is more personally identical with the baby into which he develops within an hour's time than the born baby is so with itself (if the expression may be pardoned) one, twenty, or it may be eighty years after birth. There is more sameness of matter; there are fewer differences of any kind perceptible by a third person; there is more sense of continuity on the part of the person himself, and far more of all that goes to make up our sense of sameness of personality between an embryo an hour before birth and the child on being born than there is between the child just born and the man of twenty. Yet there is no hesitation about admitting sameness of personality between these last two.

On the other hand, if that hazy contradiction in terms "personal identity" be once allowed to retreat behind the threshold of the womb, it has eluded us once for all. What is true of one hour before birth is true of two, and so on till we get back to

the impregnate ovum, which may fairly claim to have been personally identical with the man of eighty into which it ultimately developed, in spite of the fact that there is no particle of same matter nor sense of continuity between them, nor recognized community of instinct, nor indeed of anything which goes to the making up of that which we call identity.

There is far more of all these things common to the impregnate ovum and the ovum immediately before impregnation or again between the impregnate ovum, and both the ovum before impregnation and the spermatozoon, which impregnated it. Nor, if we admit personal identity between the ovum and the octogenarian, is there any sufficient reason why we should not admit it between the impregnate ovum and the two factors of which it is composed, which two factors are but offshoots from two distinct personalities, of which they are as much part as the apple is of the apple-tree; so that an impregnate ovum cannot without a violation of first principles be debarred from claiming personal identity with both its parents, and hence, by an easy chain of reasoning, with each of the impregnate ova from which its parents were developed.

So that each ovum when impregnate should be considered not as descended from its ancestors, but as being a continuation of the personality of every ovum in the chain of its ancestry, which every ovum *it actually* is quite as truly as the octogenarian is the same identity with the ovum from which he has been developed.

This progress cannot stop short of the primordial cell, which again will probably turn out to be but a brief resting place. We therefore prove each one of us to be *actually* the primordial cell which never died nor dies, but had differentiated itself into the life of the world, all living beings whatever, being one with it and members one of another.

*From the College of Physicians and Surgeons, Columbia University, and
the Presbyterian Hospital*

Racial Extraction: Irish.

F. Mother

(1) F. Father

Died at 80 years. Capable, dominating woman, maintained the position as head of the family. Managed business successfully.

Died at 60 years. Delirium tremens. Chronic alcoholism. Owned small country store. Unsuccessful. Wife managed business and family.

(2) F. Brother

Lived to 60 years. Athletic build. Health good. Wealthy successful merchant in Dublin. Dominant personality. Hobbies: fishing and hunting. Married. Two children.

F. Brother

Died in early 30's of tuberculosis. Medium build. Managed country store. Not married.

F. Sister

Died in early 30's of tuberculosis. Short, slender. "Lived for and with mother. Fear of going out alone. Few social contacts. No men friends.

Pl's Father

Living, 57 years. Medium height; slender; sharp, finely chisled features. Health good.

Voice teacher with high standing. Poor financial provider. Completely absorbed by work, 8 a.m.—10 p.m. Gave up teaching 7 years ago. Temperamental maladjustment. Now runs small country store. Wife's conditions precipitated change. Violent temper. Married at 18 years. Little interest in family.

Pl's Mother

Living, 56 years. Short, stout. Delirium tremens in 30's. Excessive drinking from 30-48 years.

Woman of marked social charm and grace. Maladjustment in home led to alcoholism. Has begun several business ventures in interior or decorating. Personal habits cause failure. Excellent music and artistic. "Peculiarly sweet and tender person." Married at 17 years. No drinking after birth of last child.

Two Brothers,

One Sister
Died at 40-50 years of age. No further information.

M. Brother

Farmer in Michigan. Not married.

M. Sister

Quiet retiring. Married; several children. No further information.

(3)

Sister

Medium height; slender. Health good.

Took mother's place in the family. Dominating, critical. Married at 20 years to a physician. Adaptation poor. Extravagant, selfish. Two children. Little attention or apparent interest in children.

Patient

Medium height; slender. Acute rheumatic fever at 15 years. Duodenal ulcer. (See personal study.)

Sister

Medium height; slender. Club feet—operative treatment. Health good.

Quick tempered, erratic, indecisive. Only member of family who defied father during his temper tantrums. Came to America at 30. Married shortly afterward to ship acquaintance. First male friendship, unhappy marriage—history of frequent separation with impending divorce. Three children.

Sister

Short; slender. Long history of chronic eczema during childhood. Quiet, gentle, sensitive. Usually cried during family quarrels. Married at 23 to a physician. Three children. Constant friction. Mcneely distribution and his attention to other women. Divorced. She now manages a hotel and is a successful executive.

Sister

Medium height; slender. Chronic constipation. Indigestion—care in selection of food controls this. Living, 23 years.

Critical, argumentative, self-assertive. Has set ideas. Selfish determination to lead her own life. Ambitious. Holds good social position. Maintains her own apartment. Many men friends though she scoffs at marriage in view of the maltreatment of her parents and sisters.

can be

Fig. 1. Showing amount of information about numerous members of a family which can be obtained by painstaking interviews with as many individuals in the clan as possible.

Illustration by courtesy of Archives of Internal Medicine from *The Man-Environment Unit and Peptic Ulcer* by Draper and Touraine.

Perusal of the foregoing statement indicates that should one attempt to make a detailed investigation of the elusive quality which is called "individual constitution" by modern workers, and "personal identity" by Butler, one is forced to consider three stages at the outset of a person's life. These are all intimately involved in the production of the completed individual (phenotype) who as patient confronts the physician.

The first state of the individual is that of the fertilized egg—the microscopic treasury of a complete genetic history. From the organismal standpoint, Conklin³ emphasizes the significance of this tiny unit by the statement that "from its earliest to its latest stage an individual is one and the same organism, the egg of a frog is a frog in an early stage of development." The second and third stages are those respectively of the developing embryo and the infant years. These epochs will be dealt with in subsequent articles.

Further consideration of the first stage leads naturally to the study of a human being's heredity and brings up the whole difficult problem of clinical genetics. There are some who feel that very little value can be attached to anyone's account of his forebears. Few of us can recall much detail of the lives of even our grandparents. For this reason Siemens⁴ tries chiefly to get information about collateral branches of the patient's family. We have not limited our investigations in this way however, believing that every now and then most valuable and dependable information about ancestors can be found. In general our genetic studies have embraced the following points: racial extraction, morphologic types, disease history, sex distribution and in a few disease groups also the psychologic pattern. In taking the family disease and psychological histories one must beware of the patient's tendency to project his own symptoms and attitudes of mind upon other members of the clan. For this reason it is desirable to interview as many other persons in the family as possible. An example of the form in which a family history, designed to display personal identity or constitution pattern, may be conveniently arranged as shown in the plan⁵ on the facing page (Fig 1).

CASE I* A woman physician of Russian Jewish extraction, suffered from migraine, myopia, hypertension, nephritis, and at the time of the examination was passing through the menopause. In the past she had had mild rheumatism, arthritis, and asthma. She was also the mother of a feeble minded child and this circumstance coupled with the pathological states which she observed in her ancestry, had stimulated her interest in securing an account of her forebears and collaterals which was as accurate and detailed as possible. It might be remarked in passing that the discomforts of her own illness were not rendered easier by the knowledge of the special tissue fault which caused the death of so many of her relatives. Indeed, she had resigned herself to the belief that she would die from the same cause to which many of them had succumbed. The genetic history shows a marked weakness of the cardiovascular system (Fig 2). The patient's mother, two of the patient's mother's brothers, and three of her sisters had died of cerebral hemorrhages, all having died at the third attack. The patient's maternal grandmother died of her second cerebral hemorrhage. More remote family history was not available. A brother and a sister of the patient's mother died when forty-five years old of cardiac diseases. The patient's only brother has the history of a heart lesion, angina pectoris, asthma, and syphilis, the treatment of which in 1927 caused salvarsan poisoning. There are four known cases of rheumatic heart disease in the maternal line of this family and one case of nephritis and hypertension aside from the one already referred to above. There is, likewise, one case of diabetic gangrene. It was not possible to get histories of all the relatives, due to the fact that they were in Europe, and there is little contact between the two families. The patient's mother had severe myopia and at the time of her death, at the age of sixty, was practically blind. No other member of this family, except the patient, is known to have had any eye trouble, and none have worn glasses. Both

* Cases I and II and the studies on inguinal hernia and acute rheumatic fever are quoted almost verbatim from the article entitled *Studies in Human Constitution VI Clinical Genetics* which appeared in *J. A. M. A.* Vol. 92, page 2149, 1929. This material has been used again because it falls naturally into place in the present more complete discussion.

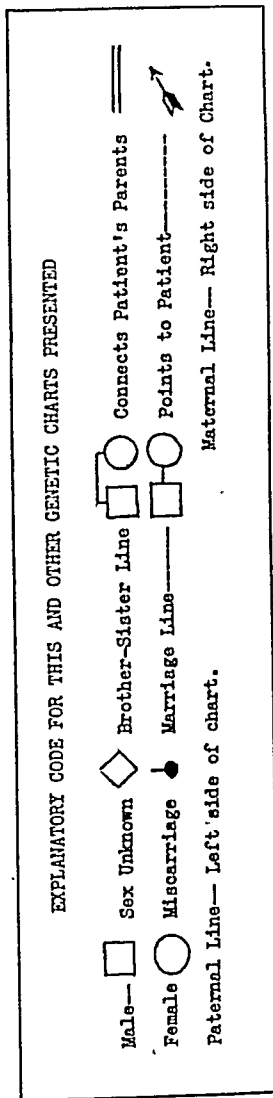


Fig. 2. Family Tree of Patient. Case I.

the patient's father and mother had migraine, but no other cases are reported in the family. The patient's brother has a microcephalic idiot child. Since the birth of the child, he has had a normal child by a different wife. Last year he found that he had syphilis but does not know for how long he was affected. The patient's youngest child is mentally retarded but apparently not to a marked extent.

This case also illustrates in an interesting way the effect which the thought of her anticipated end exerted upon the woman's total personality. Not only did her tissues contain the menacing heredity, but the knowledge of it became a destructive factor in her adult psychological environment. It colored her whole life, which is to say, herself, and evidently contributed to the impression of eager intense concentration and alertness which emanated from her.

CASE II The second study presents the case of a young woman thirty years of age. Diagnosis: acute rheumatic fever with heart involvement, mitral insufficiency. The patient is tall and slender with narrow face, blue eyes and light blond hair, and well represents a mixture of northern progenitors which includes, on the paternal side, German Lithuanian, Norwegian, Swedish and Scotch elements, on the maternal side, Scotch, English and German. Furthermore, the parents of the patient were distant cousins and there have been at least five other intermarriages between the two families at other points across the five generations recorded. The patient is a highly trained worker in various fields of biological technique related to medicine. Consequently she is familiar with medical terminology and the symptoms of disease. Her intelligence is of a high order and the measure of her general culture is perhaps best indicated by her command of at least four languages besides English (Fig. 3).

In this remarkably complete history, there is reliable and detailed information about every member of the family for the past three generations. Concerning those in the direct line, the facts are practically complete for five generations. The number of individuals in the first two generations about whom anything is known is more limited than in later ones,

but everything which is reported about these remote members of the clan is correct.

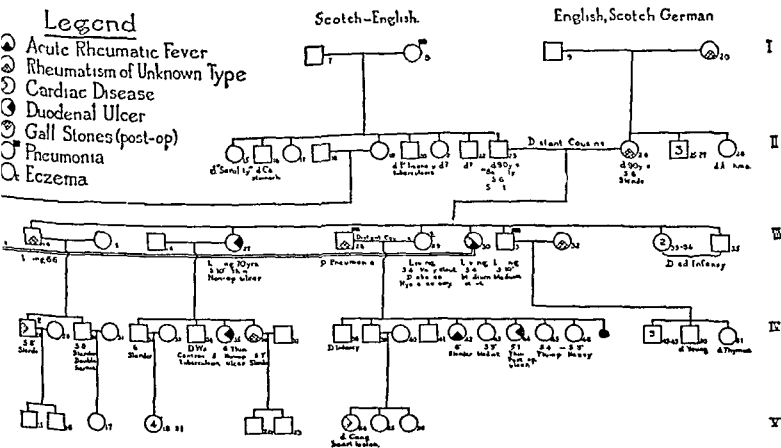
The outstanding quality of disease susceptibility in both sides of the patient's family appears to be the capacity of the members to develop rheumatism with cardiac sequelae. There is besides an obvious lack of resistance to pneumonia, which appears regularly for five generations in the direct line on the father's side. While this pulmonary inadequacy is not so intensively developed in this family as in the Hinking Nowhied family reported by Pearl⁶ still its occurrence is so constant as to merit consideration from a constitutional standpoint. Duodenal ulcer also was a disease which the patient developed and there are three other cases with this condition on the maternal side. Curiously enough, all these duodenal ulcers occurred in women, a circumstance which is quite foreign to our experience. Furthermore, these duodenally affected females were slender, delicate and essentially feminine types. This likewise does not accord with our experience that it is the more masculine type of women who develop ulcer. In addition to the patient's own rheumatic fever, heart disease and pneumonia she is extremely sensitive to skin eruptions and urticaria. In this connection, it is interesting to observe the scattered cases of eczema and hives which appear in the chart. So far as physical habitus is concerned, practically every member of the entire family is of the marked linear type, many indeed being well above the average height. In the fifth generation of the family there are several instances of congenital anomaly, two heart lesions and one case of undescended testis and inguinal hernia.

The living conditions in which this whole family has developed have always been of the very best. Many of the members have followed the highest types of professional careers and in some instances there has been more than average wealth. The patient's mother was an extremely nervous woman who was continually emphasizing the importance of disease prevention to her children. She was evidently oversolicitous in respect of her children's health because the patient remembers vividly, as the outstanding episodes of her early childhood and ado-

valuable the genetic survey can be in helping us to understand the woman within the patient, they do not clearly reveal a mechanism of heredity. Yet it is among unusually complete family records of this sort that one occasionally encounters an almost perfectly worked out genetic experiment. The reader is referred to Fig 16 for an example of such a case. There is a great difference, however, between the point of view of the experimental geneticist and that of the family doctor who seeks all the information he can about his patient's forebears and siblings. The experimentalist determines the conditions and selection of crosses in the animals he employs and then observes the results. Upon these he builds explanatory hypotheses and may fall upon the danger of creating biological entities by the use of names, as for example, the "determinants" of Weissmann and the "genes" of Johannsen and of Morgan. In fairness to the latter two observers, however, it should be said that they are more interested in a dynamic or chemicobiological concept than in a strictly morphological or topographic one. The physician, on the other hand, can witness only the results of accidental or naturally selected matings. From these he tries to draw some help in the difficult task of judging the per-

sonal identity of the patient, and some idea of the latter's disease potentiality. Yet it is also true that from certain observations on human heredity in the clinic some of the laboratory demonstrations of genetic mechanism such as that of hemophilia, were very accurately foretold.

But those other aspects of clinical genetics recounted under Cases I and II deserve the utmost consideration for they are of immediate value to the physician. The stranger one meets, or the new patient, appears at first as a detached specimen. One sees him, as it were, isolated in space, in a colorless setting. If, however, the family members can be sketched in, in greater or less detail, one then sees the person against a background into which he fits and from which he seems to draw illumination. Furthermore, just as we know that conduct or behavior resemblances, as well as physical, "run in families" so we know of various pathological states which do likewise. The twinning or doubling tendency already referred to has been thoroughly studied by Ashner in J. Bauer's clinic. In addition, a number of other inherited developmental faults in structure have been described, as, for example, hammer toe, hare lip, cleft palate, congenital cataract, etc. From our collection, the following



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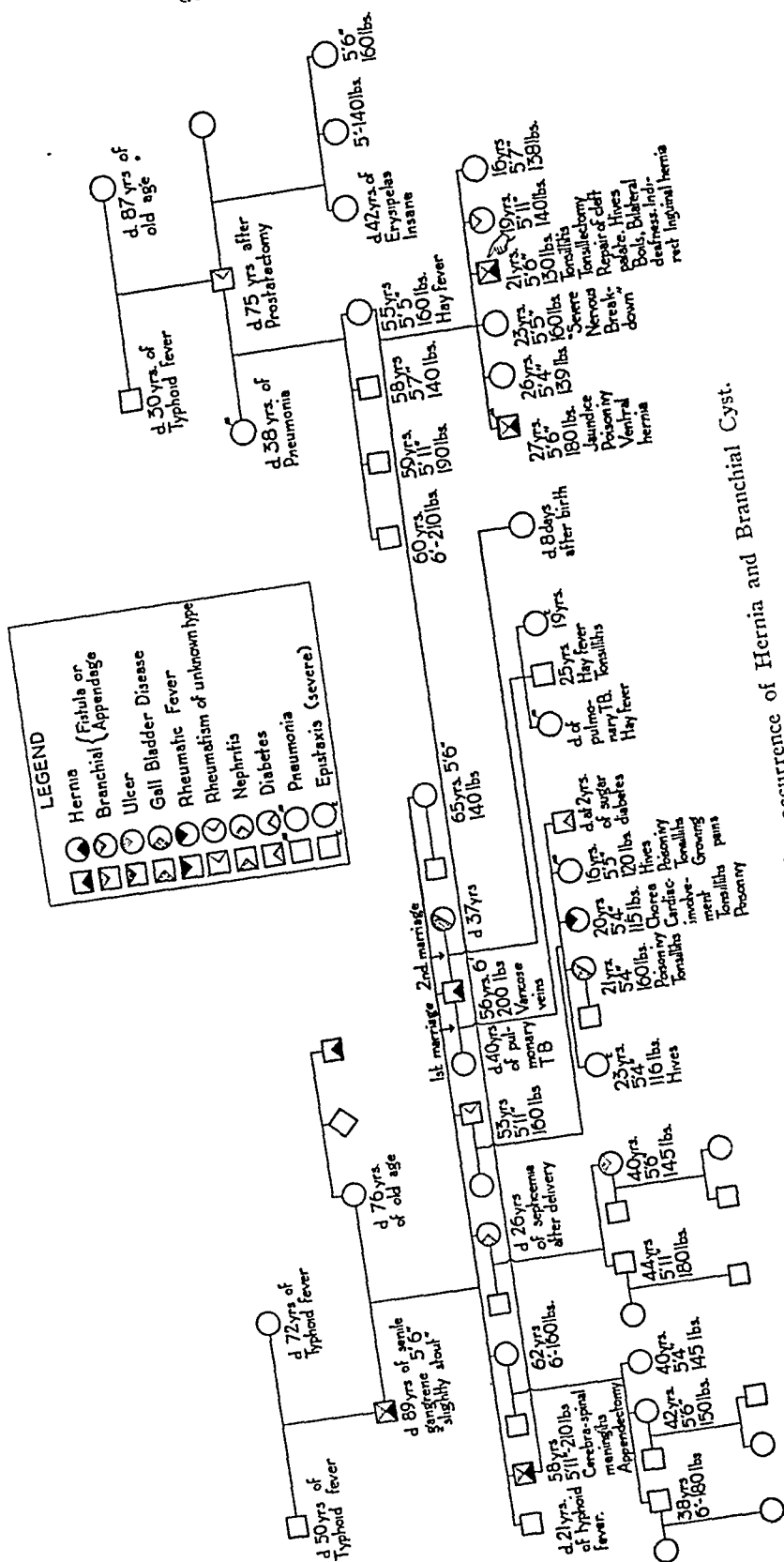


Fig. 4. Family Tree showing occurrence of Hernia and Branchial Cyst.

example of the inguinal hernia with branchial cyst is of interest (Fig 4) Besides anatomical abnormalities, many disturbances in tissue function, either motile or secretory (chemical) are likewise known to be inherited. Some of the most important of these have been discussed by Garrod,⁸ and by Bauer and Ashner.⁹ Recently, White and Pinkus¹⁰ have shown that diabetes (pancreatic tissue secretory fault) is inherited in Mendelian recessive fashion. Some families display one or more of these disturbances in such striking fashion that the underlying genetic mechanism can be accurately inferred. Consequently, the physician who would pluck from his patient's family tree facts which may illuminate the man's total personality, should know at least the main principles of heredity.

While it is not possible within the scope of this article to present a full discussion of all the findings of experimental genetics, there are two principle

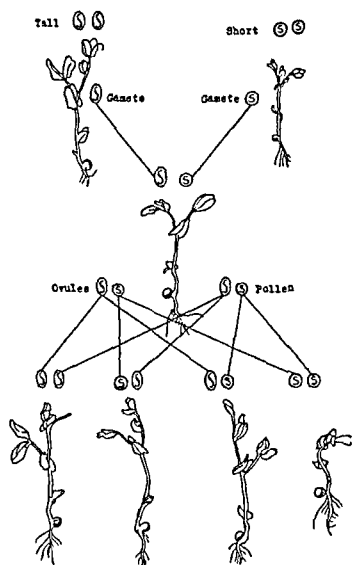


Fig 5 Diagram after Morgan showing simple Mendelian inheritance

Illustration by courtesy of Lippincott Co from *The Physical Basis of Heredity* by Morgan

mechanisms which may be mentioned with advantage. The most widely known genetic phenomenon is the one generally called typical Mendelian inheritance. The simplest expression of this arrangement is displayed when two varieties of pea plants, one tall and the other short are crossed (Fig 5). The quality of tallness is stronger than (or dominant to) shortness, so that all the offspring from this first cross are tall. The quality for shortness, however, is not lost, it has gone, as it were, into hiding. If now two members of such a mixed generation be crossed the recessive quality of shortness reappears, and always in the same proportion of one short to three tall plants.

These distinguishing characters which appear in the full-grown plant are dependent upon certain factors which are held in the chromosomal material and then, passed on in fixed proportion to the offspring, are carried out by the factors themselves (Weissmann's determinants, Johannsen's genes), within the cell bodies of egg and sperm during fertilization. The elaborate maneuvers which the gene bearing chromosomes execute can be seen under the microscope. Thus, for example, in many species it appears that the chromosomes differ in shape and size, and that there are always two of each variety. In the preparation for impregnation, the chromo-

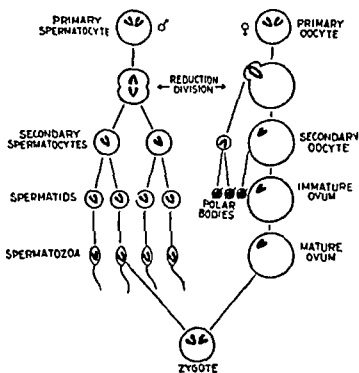


Fig 6 Comparative diagram of spermatogenesis and oogenesis (From Mohr)

Illustration by courtesy of McGraw Hill Pub. Co from *Genetics in Relation to Agriculture* by Balcock and Clausen

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somes of both egg and sperm divide into two equal groups, each group containing one member of each homologous pair of chromosomes. One of these groups is cast off in the egg cell or sperm cell. When these two cells unite, each bringing the reduced complement of half its chromosomes, the original number appropriate to the species is reassembled. (Fig. 6) The chance combinations of paternal and maternal chromosomes which can result from the reassemblage is best shown in Fig. 7. Sometimes, individual members of chromosome pairs may break up in the rearrangement and exchange parts. This results in the phenomenon known as "crossing over," (see Morgan) and accounts for the limitless possible combinations of characters in the offspring of a given stock. But the genes, the actual factor bearers, within most of the chromosomes are too small to visualize definitely. Their nature and arrangement have been inferred however, from many thousands of ingeniously devised breeding experiments. Recently it has been shown that in the huge chromosomes of dipteran salivary gland cells, the genes can be seen as transverse beaded bands. Bridges¹⁰ has made maps of these. The present notion is that the genes exist in pairs strung in long strands like a double string of pearls, the members of each pair carrying like factors.

It would appear further that the genes have a variable relation to factors; thus, a gene may carry only one factor or several which determine certain characters in the finished organism; or several factors which go to form a single part may

...over
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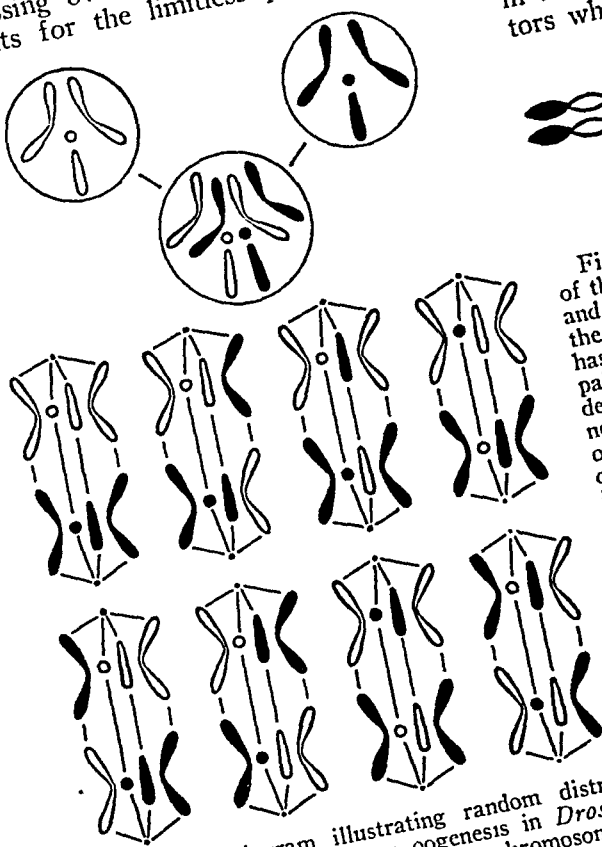


Fig. 7. Diagram illustrating random distribution of chromosomes in oogenesis in *Drosophila melanogaster*. Upper left, chromosomes contributed by the female parent; upper right, those contributed by the male parent to the zygote containing the diploid number of chromosomes. Below, the eight different types of distribution which occur in formation of gametes by such an individual. From Babcock and Clausen.

Illustration by courtesy of McGraw Hill Pub Co from *Genetics in Relation to Agriculture* by Babcock and Clausen.

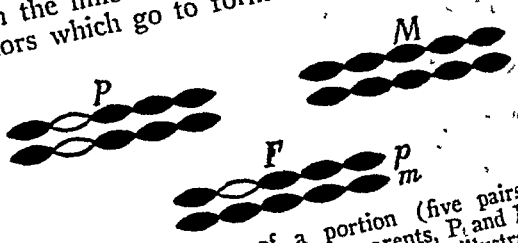


Fig. 8. Diagram of a portion (five pairs) of the chains of genes in two parents, P and M, and in one of their offspring F, to illustrate the workings of heredity. The father (P) has two defective genes (white) in one of his pairs (the second) and is therefore personally defective. The mother (M) has both genes normal in this second pair. The child (F) receives one from the mother (m) and one from the father (p), so is not personally defective.

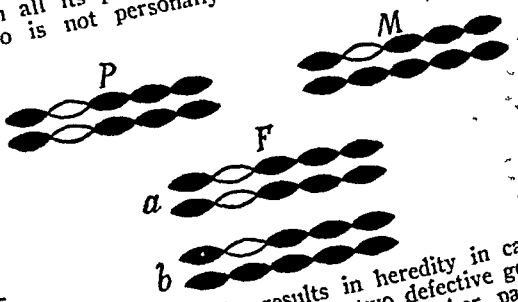


Diagram of the results in heredity in cases where one parent (P) has two defective genes (white) in a certain pair, the other parent (M) one defective gene in that pair. Some of the children (F) receive two defective genes in that pair (a) and are therefore personally defective; others receive only one (b), so that such are not personally defective.

Illustration by courtesy of Norton & Co from *The Biological Basis of Human Nature* by Jennings.

be distributed over more than one gene. When there is a fault in the gene structure, it may involve one or both members of the pair. If both members are faulty, then the fault surely goes over into the fertilized cell. If only one member of the gene pair is faulty and the other sound, then either fault or soundness is transmitted. If the fault is recessive (as faults usually are) and is transmitted, it may be concealed because it unites with a sound (or dominant) member from the identical pair of the other cell in the union. The diagrams from Jennings illustrate the principle (Figs 8, 9, 10).

The second fundamental genetic phenomenon to which reference will be made

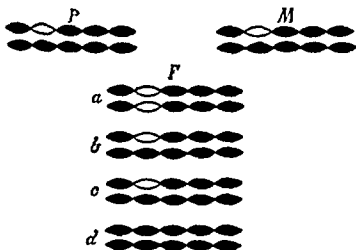


Fig 9 Diagram of genes to illustrate the results in heredity when each parent has one defective (white) in the same pair. The parents P and M, having a normal gene in each pair, are not defective. Of the children (F), some receive a defective gene from each parent as at a, such will be personally defective. Others receive but one defective gene (b and c), or none (d), these will not be defective.

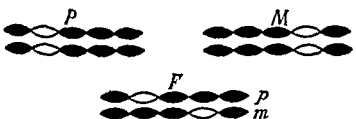


Diagram of genes in parents and offsprings to show how inferior parents may produce superior offspring. The father (P) has both genes defective (white) in the second pair shown, the mother (M) both defective in the fourth pair, both are therefore personally defective. The offspring (F) receiving one set of genes (p and m) from each parent has no pair in which both genes are defective (white) it is therefore not personally defective. Each parent supplies a normal gene for the pair that is defective in the other parent.

Illustration by courtesy of Norton & Co from *The Biological Basis of Human Nature* by Jennings

here is that which explains the inheritance of sex. The description of this mechanism by Babcock and Clausen is so brief and clear that it is quoted in full.

In certain forms particularly in animal species there is a constant difference in the chromosome complex of the two sexes which provides a splendid illustration of a somatic difference related to a cytological one. The chromosome differences in sex in *Drosophila melanogaster* are illustrated in

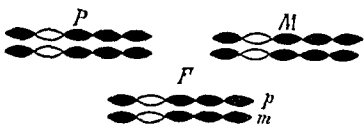


Fig 10 Diagram of genes to illustrate the results in heredity when two defective parents (P and M) have both genes defective (white) in the same pair. The offspring (F) then receive one defective gene in that pair from each parent such offspring are therefore personally defective like the parents.

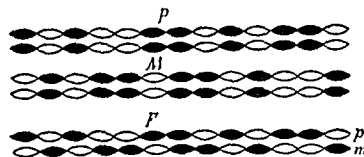


Diagram illustrating how parents showing many heredity defects may produce offspring with none. The father (P) has many pairs of genes with both numbers defective (white) and the same is true of the mother (M). But their defects are in different pairs hence the offspring (F) receive in every pair at least one normal gene (black) and is therefore without the parental defects.

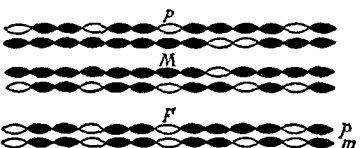


Diagram showing how parents (P and M) having no personal defects may produce offspring (F) with many personal defects. Each parent has a single defective gene (white) in several of his pairs and these defective genes are in the same pairs in each parent. In consequence some (not all) of the offspring may receive two defective genes in many pairs as shown at F such will show many personal defects.

Illustration by courtesy of Norton & Co from *The Biological Basis of Human Nature* by Jennings

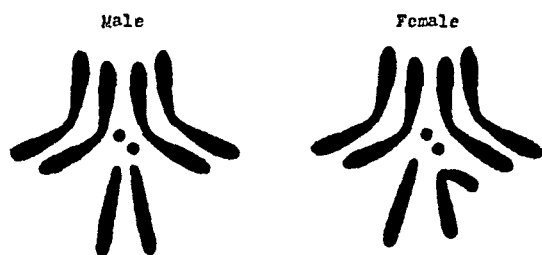


Fig. 11. Diagram showing the characteristic pairing, size relations, and shapes of the chromosomes of *Drosophila melanogaster*. In the male an X and a Y chromosome correspond to the X-pair of the female. On the basis of X equals 100, the length of each long autosome is 159, of each small autosome 12, of the whole Y 112, of the long arm of the Y 71, and of the short arm of the Y 41. (From Bridges.)

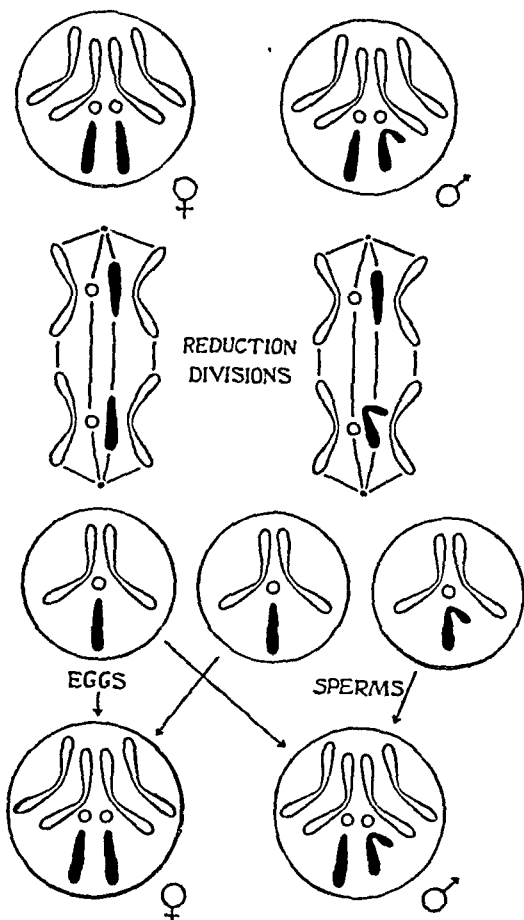


Fig. 12. Diagram to show chromosome relations in the inheritance of sex in *Drosophila melanogaster*. The sex-chromosomes are represented in full black in order to focus attention on them.

Illustration by courtesy of McGraw-Hill Pub. Co. from *Genetics in Relation to Agriculture* by Babcock and Clausen.

Fig. 11. In the female there are four pairs of chromosomes, each of which consists of two exactly equivalent members, one of which is like the two members of the corresponding pair in the female, but the other is morphologically different; it is longer than its mate and is J-shaped instead of straight. The members of the three pairs of chromosomes which are alike in the two sexes are called autosomes; those of the unlike pair are called sex chromosomes. The sex chromosomes of the female and the similar one in the male are called X-chromosomes, and the unlike member in the male is called the Y-chromosome.

The way in which the chromosome difference in the two sexes is preserved from generation to generation is shown diagrammatically in Fig. 12. Beginning with the parents, the diploid number is shown in the circles. In the female, the three pairs of autosomes are outlined and the X-chromosomes are drawn in full black to focus attention upon them. Correspondingly, in the male only the X- and Y-chromosomes are drawn in black. The reduction divisions in the female result in the production of eggs each of which contains two large curved and a small autosome and one X-chromosome. In the male, the reduction divisions give rise to two kinds of sperm in equal numbers; one containing three autosomes and an X-chromosome; the other, three autosomes and a Y-chromosome. In the ensuing fertilization, the union of an egg

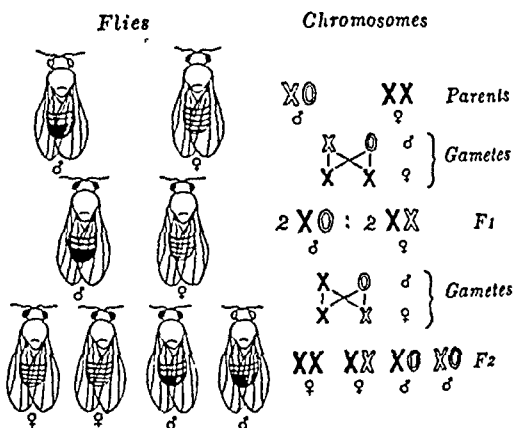


Fig. 13. Sex-linked inheritance of white and of red eyes in *Drosophila*. Parents, white-eyed male and red-eyed female; F_1 , red-eyed males and females; F_2 , red-eyed females and equal numbers of red-eyed and white-eyed males. A black X indicates an X-chromosome bearing the gene for red eye, a white X bears red eye. O indicates that an X is wanting; Morgan replaces it by Y. (From Conklin, after Morgan.)

Illustration by courtesy of Cambridge Press from *Genetics and Eugenics* by W. A. Castle.

with a sperm containing three autosomes and an X-chromosome produces a female zygote; and the union of an egg cell with a sperm cell containing three autosomes and a Y-chromosome, a male zygote. Obviously, the operation of this mechanism preserves the chromosome inequality of the two sexes, and at the same time accounts for their observed numerical equality.

The X-chromosome, however, does not carry the factor for the sex character alone. Other genes representing factors for other characters are also present. But these go along with the factor for sex

parallelism between certain hereditary family characters which may be seen in clinic, and certain kinds of genetic mechanisms which have been demonstrated in the laboratory.

The first instance from our own series is the case of a woman of sixty-three who came to the hospital with sugar in the urine. In addition, she presented double ptosis of the eyelids, subcutaneous fibromata, a curious redundancy of the visceral conjunctiva, and later died of coronary disease.



Fig. 14 Photograph showing subcutaneous fibromata, double ptosis of eyelids and redundancy of conjunctiva at corneal margin.

and so come to character expression in the new individual precisely as sex does. Characters which are transmitted in this way are said to be "sex-linked." The phenomenon is well shown for the character of eye color in the fruit fly in Fig. 13. As was indicated at the outset of these remarks upon genetic mechanism, further discussion of the subject cannot be entered into at this time. Those readers who are interested are referred for the complete material to the writings of Morgan,¹¹ Jennings,¹² Castle,¹³ and Babcock and Clausen.¹⁴

With the foregoing notions in mind, we can proceed more easily to discuss the

Fig. 14 shows the visible insignia which were so intensively distributed through three generations. In the F. 2, eight out of nine living members of the fraternity show some parts or all of the marks. In F. 3, fourteen out of twenty-two are variously affected. The genetic chart (Fig. 15) which presents all the available facts, seems to show that the defect is inherited from the mother's side of the house. But this point will be further discussed later.

Although Jennings believes that defective characters are in the main recessive, he cites several which are dominant; among these are the conditions of brachy-

Inheritance of Redundant Conjunctiva, Ptosis, and Cutaneous Fibromata

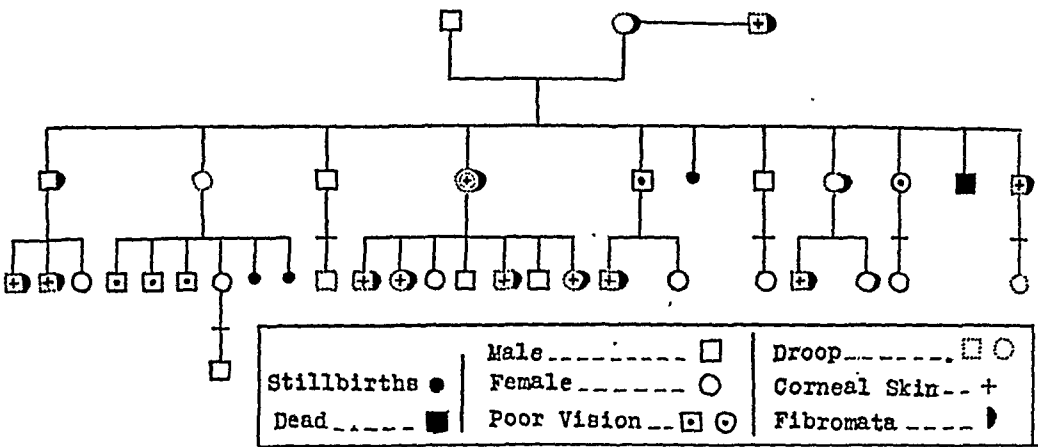


Fig. 15. Diagram of family tree of patient shown in Fig. 14 showing distribution of lesions.

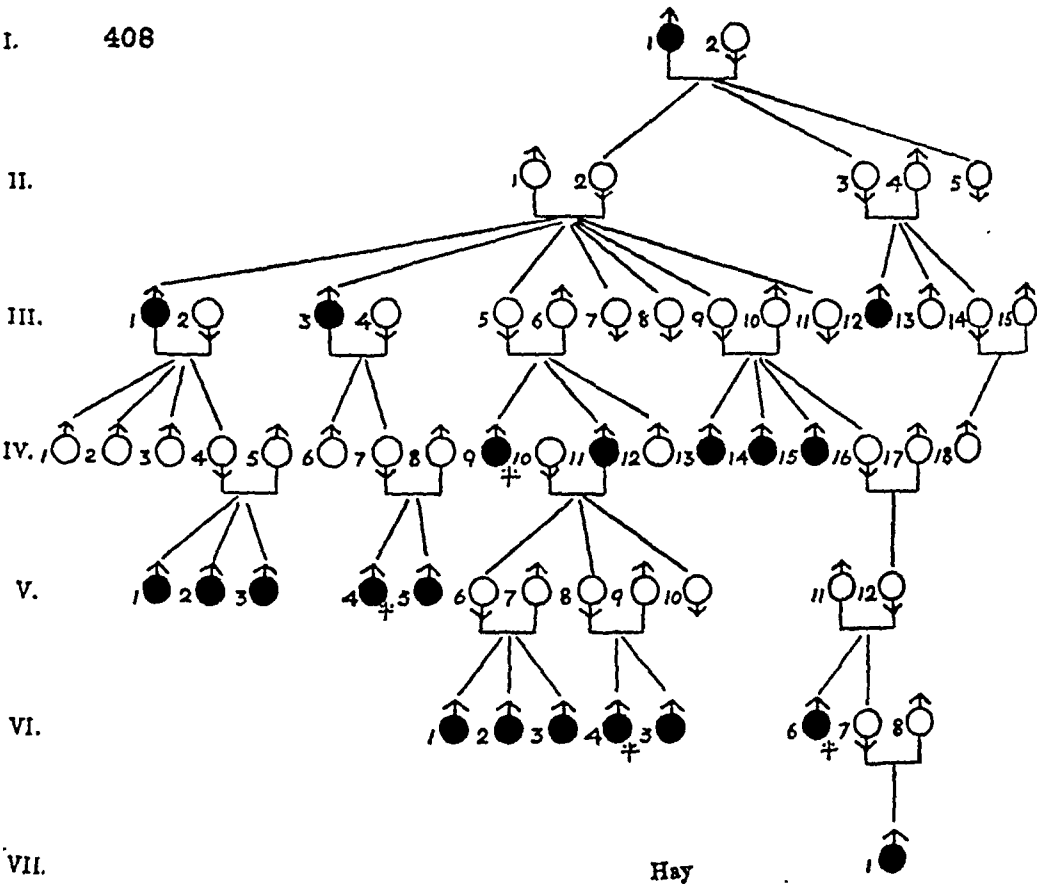


Fig. 16. Diagram showing inheritance of hemophilia. After Bullock and Fildes.

dactylism, and of lateral union of two fingers. It should be remembered, however, that in clinical medicine the question of recessiveness and dominance is further complicated by the fact that a dominant character for susceptibility does not in itself produce the given disease. In the absence of the appropriate external agent, obviously the disease cannot occur. Consequently, in such a situation a dominant susceptibility character may remain undisclosed and so behave as a recessive normally does in the skipped phenotype.

The case under discussion is probably of like nature to those mentioned by Jennings, namely, a dominant defective characteristic, and is especially significant in view of White and Pinkus' recent work on diabetes. The question at once arises whether this patient had diabetes in the accepted sense of that term. The thought presents itself that the islands of Langerhans were functioning inadequately due to mechanical constriction by the overgrowth of interstitial tissue, rather than because of an inherited fault in the germ plasma of the island cells. The defect seems to involve mesodermal tissue in each lesion, and may be explained in one of two ways. Either the fault involved the original mesodermal layer as a whole, or the disturbance is present in the neighboring gene pairs which control the affected parts. This notion has been advanced by Ashner to explain those rare instances in which the same combinations of widely diverse structural defects appear repeatedly in individuals through several generations. In her discussion of this remarkable occurrence, Ashner presents some families in which congenital absence of the patella is found in conjunction with failure of the thumb nail to develop.

The intensity and extent of the defect in the case are so great that one inclines to believe that the patient's father also may have carried similar faulty genes. He was reported to be blemish-free, as were also a few of the descendants. Some of these, however, were still in Europe and not available for examination. This situation presents one reason why clinical genetic studies cannot proceed rapidly. Scattering of the clan, as well as poor memory, too often leave gaps in the evidence. In this instance, therefore, if we

assume that the patient's father likewise carried similar defective genes, either one of the diagrams of gene distribution may be applied (See Figs 8 and 10).

The next example is drawn from Bulloch and Fildes' study of hemophilia (Fig 16). This remarkable disease is especially important for our purpose. In the first place, it illustrates one of the earliest recorded instances of successful preventive medicine through the application of knowledge of the perceptive or intuitive sort. Maimonides (1135-1204) is said to have advised that a boy was not to be circumcised if his two brothers by the same mother, but by different fathers, had died after the operation. There is also reference in the *Tractat Jebemoth* (2d century A. D.) to the rule that a boy must not be circumcised if two sons of his maternal aunt have died from the procedure. The fixed nature of this type of passage of an inherited character through an unaffected mother to half her sons has been shown by laboratory experiments to be due to a defect in an X chromosome of the father. Considered from the standpoint of dominance and recessiveness, it is obvious that sex-linked characters are dominant in the male and recessive in the female. Consequently, the faulty character is one of the so called sex linked ones previously mentioned (See Fig 13). Doubtless a biological principle here finds expression. But one should heed Morgan's warning that as yet it is unsafe to infer from the fruit fly's evidence that there is an identical sex determining mechanism in man.

The foregoing discussion of genetic mechanism and of the hereditary characters stamped upon individual clans was undertaken primarily in the effort to focus attention upon the nature of the individual within the patient. From this standpoint, the family genetic history serves a double purpose. Not only does it help to illuminate the personal identity of the patient, but also it may often aid in the diagnosis of disease by directing attention to a genetic fault in the family which has frequently found expression in a well recognized malady. It is entirely on account of this secondary bearing upon disease probability that Siemens has developed the subject of human genetics so actively in his clinic.⁴ Because of this attitude,

however, which displays perhaps less concern with the concept of constitution in the sense of clinical organismalism, Siemans warns against the danger of assuming that an unexplained malady is due to an inherited (idioplasmatic) tissue fault. He is wary of the geneological chart as not carrying adequate proof of such a fault. He insists that convincing evidence of inherited disease potential is only to be found in the statistical method, and in support of this contention he quotes Fr. Mueller's well-known dictum that "in the whole of medicine a correct numerical count is more valuable than all the brilliant hypotheses." At this point, however, Siemans adds the following somewhat equivocal foot note: "The separation of genetic research into statistical and geneological departments is unjustified. The geneological can only serve for the classification of material; the final appreciation and compilation is always statistical."

There is no doubt that when statistical methods are applicable they carry the kind of conviction which satisfies the mind within the sphere of rational or abstract knowledge to which reference has been made. But then the question arises whether any material in the field of human genetics can ever be sufficiently extensive and precise as to justify its analysis with so refined an instrument as mathematics.* Should this turn out to be the case, we are then forced to accept and evaluate the observable phenomena of human heredity in terms of the sphere of perceptive knowledge or throw them out of court entirely. Clearly, such a course would deny all the experience recorded in folk lore and the literature of medicine.

Now, if we admit that often the genetic fact details supplied by patients and their families are inaccurate and incomplete, it may still be possible to capture the implication of certain trends which are clinically helpful though lacking the final

satisfaction of proof. As a matter of fact, there are many published reports of statistical studies in human genetics, notably those of Hanhard, Siemans, Bauer and Ashner, and latterly Pinkus and White. These last named authors show on a large material that diabetes is an inherited character which follows the course of a typical Mendelian recessive.

In our genetic studies which were undertaken primarily as part of the investigation of the given individual's constitution or personal identity, the material from two groups of patients was likewise considered statistically.

One group of thirty patients suffering from inguinal hernia, provided reliable information on 253 men representing the male constituents of the total population of thirty families. Of them, sixty-one or 24.11 per cent have had hernia. It is interesting to cite here that a hernia rate of 5.1 per cent was reported in about 16,000 health examinations by the Life Extension Institute made on white males.¹⁷ Besides this, 2.1 per cent cases of postoperative hernia were found in the same series. Thus, a total of 7.2 per cent would seem to represent the average hernia rate for the general male population. Further, analyzing the data from the thirty families, it appears that when the patients are excluded, there remains a male population of 233 persons. Of these, thirty-one or 13.9 per cent had hernia. Of the thirty fathers of the patients, fourteen or 46.66 per cent had hernia. Of the fifty-five brothers of the patients, eight or 16.36 per cent have hernia.

In the sixteen families where the father of the patient did not have hernia, there are twenty-two male children exclusive of the patients. Of these, one or 4.54 per cent has hernia. On the other hand, in the fourteen families where hernia is present in the father, there are thirty-three sons exclusive of the patients. Of these, seven or 21.2 per cent have hernia. In view of the small numbers involved in this study, it is obviously unjustifiable to draw general conclusions concerning a possible heredity factor in hernia. Furthermore, the literature is barren of specific data bearing on this point. However, when the findings of this series are compared with those of the Life Extension

*The paper of Pinkus and White is an admirable illustration of the skillful and wise use of the statistical method in human genetics for clinical purposes. These authors are fully aware of the unreliability of information about individuals who have not been personally investigated by the observer. Yet they present very satisfactory evidence of the manner of inheritance of diabetes.

Institute figures, they would seem to present enough implication of an hereditary factor to warrant further investigation.

Our second group study was made on a series of peptic ulcer and of gallbladder families.¹⁸ When these two groups of families are placed side by side, the differences stand out quite as clearly as do the differences in the individual patients of the two groups.

Sex Distribution. The ulcer families are represented by twenty-six male patients and six female patients, and the gallbladder families by five male patients and twenty-seven female patients. No sex selection was made in taking the histories, so long as the patient was able to give intelligent cooperation. In the members of the ulcer patient's immediate fraternity, exclusive of the patient, a sex distribution in the ratio of 138 males to 100 females is found, while the gallbladder families present quite the opposite picture of 100 males to 130 females. There is, then, a tendency for the ulcer families to produce a preponderance of males and gallbladder families a preponderance of females.

Morphology. In general terms a description of the habitus of members of the family was elicited. The terms slender, medium, stocky, and stout were employed. The ulcer families reported seventy-five per cent of the brothers and sisters of the patient as slender or medium build, while the gallbladder families reported fifty-four per cent of the immediate members of the patient's fraternity as stocky or stout. Seventy per cent of the fathers of patients with ulcers were described as medium or slender build, and only thirty per cent as stocky or stout. Of the fathers of patients with gallbladder disease, fifty-five per cent were described as slender or medium and forty-five per cent as stocky or stout. The mothers of patients with ulcers were reported as fifty-five per cent thin and forty-five per cent stout, while just the opposite picture was found among the mothers of patients with gallbladder disease, with fifty-five per cent stocky and forty-five per cent thin. The findings show that the slender and the medium build are in the majority in the ulcer families and the stocky or stout in the majority in the gallbladder families.

Disease Incidence. Peptic ulcer was found in six of the ulcer families, indefinite stomach trouble in thirteen additional families and cancer of the gastrointestinal tract in a further family, a total of twenty, or sixty-two per cent, with a heredofamilial weakness of the gastrointestinal tract. Ruhmann¹⁹ found forty-eight per cent of fifty families with a similar hereditary history; Aschner²⁰ found 65.3 per cent and Spiegle²¹ found sixty-one per cent. Aschner reported that fifteen per cent of the families of healthy persons gave such a history; Spiegle reported 15.5 per cent. Assuming that there is a hereditary influence, the tendency is in the form of a pathologic inferiority of the gastrointestinal tract.

Ruhmann pointed out that definite ulcer is more frequent among the sibs and descendants of the patient, and indefinite stomach trouble is more common among the ascendants. The question arises as to the possibility that this fact may be due to more refined diagnosis nowadays and the closer familiarity of the patient with his own and the succeeding generation. Aschner concluded from her studies of 120 ulcer families that the gene for stomach inferiority is a recessive, but is not sex-linked. She found that in cases in which both parents were affected, fifty per cent of the offspring were also affected. If one parent is sick and the other has a sick heredity, twenty-five per cent of the offspring are affected. If both parents are well but show a sick heredity, ten per cent of the offspring are affected. The smaller number of families comprising our series hardly permits of such an analysis. After working over a long period with patients with ulcer, we have found it hard to conceive that a specific gene weakness is responsible for so complicated a disturbance of the vegetative nervous system as that which results in lesions of the gastrointestinal tract. Nor can we accept the condition as a recessive Mendelian phenomenon in view of the variability of the external influences that may determine its expression.

Among the immediate members of the patient's fraternity, our studies show that 3.5 males to 1 female express gastrointestinal weakness, exclusive of the patient. The mothers show the condition

twice as often as do the fathers. Seven families gave a history of such weakness among the maternal collaterals and only one among the paternal collaterals. In this connection, it should be stated that the maternal line is frequently better known to the patient than the paternal line. In all except one case, the relatives with gastric symptoms were described as of slender or medium built. The gallbladder families show that in the members of the patient's fraternity, exclusive of the patient, indefinite digestive disturbances are three times more frequent in females than males. The condition occurs with about equal frequency in the paternal and maternal lines.

Tuberculosis was found in twelve ulcer families, or thirty-seven per cent. Ruhmann reported a thirty per cent incidence in his fifty families. The condition occurred twice as frequently in males as in females. Pneumonia was reported in fifty per cent of the ulcer families, and again this condition was found to be twice as frequent in males as in females. When it is recalled that the ulcer families are represented by twenty-six males and six females, the preponderance of male susceptibility to diseases within the zone of the pneumogastric nerve in these families is interesting.

Asthma occurred in eight, or twenty-five per cent of both the ulcer and the gallbladder families. Diabetes occurred in only two ulcer families, as compared to seven gallbladder families. Gallstones were reported in two ulcer families; a mother was the subject in each case. This gives a gallstone incidence of six per cent as compared to eight per cent found by Ruhmann. The gallbladder families reported eleven cases, or thirty-four per cent of gallstone. No cases of goiter were reported among the ulcer families, while the gallbladder families reported four cases. Arthritis was found in one ulcer family and 3 gallbladder families.

Psychologic Make-Up. The study of the psychologic make-up of the families offers many difficulties. To extract from the patient a picture of the colorless personality of a brother, for example, is often an almost impossible task. Yet something may be gained from direct questioning about his schooling, occupation, stability in work, marriage, hobbies,

interests and his reaction to any specific situation with which he would be likely to come in contact. To present this phase of the study statistically is obviously impossible. However, a perusal of several selected histories will doubtless go far to show how strongly personality patterns are imprinted in the family.

Summary. The genetic studies may be summarized as follows: 1. There is a tendency for the ulcer families to produce a preponderance of males and the gallbladder families of females. 2. Patients with ulcers are of families in which the long, thin type predominates as contrasted to the gallbladder families in which the short, thick type is in the majority. 3. There is definite evidence in the ulcer families of a heredofamilial weakness of the gastrointestinal tract, sixty-two per cent of the families reporting such a history. 4. Gastrointestinal weakness is three and one-half times more frequent among males than among females in these families, and almost without exception it is found in thin people. Males of these families are also much less resistant to other diseases in the zone of the pneumogastric nerve (tuberculosis and pneumonia) than are females. 5. Diseases of a catabolic nature occur more frequently in ulcer families, and anabolic disease more frequently in gallbladder families.

A third group is formed of material from the families of forty-four unrelated patients suffering from acute rheumatic fever. Only the patients with a history of joint symptoms were accepted. All are of northern European or English extraction. All of these family histories cover two generations, a large number three, and several as many as five. There is a total population of 1,343 persons of whom rather complete disease histories have been obtained.

Of this population there are 205, or 15.2 per cent, individuals, including both our patients and their affected relatives who have a history of rheumatism. Heart cases have not been included in this group unless there was a definite diagnosis of a valvular lesion. Neither have chorea patients been used except when there were also rheumatic manifestations. Now, if the forty-four patients are excluded from the above figures, there re-

main 161 or 12.4 per cent rheumatic individuals in a population of 1,299 persons. As a basis of comparison for these figures, the group of family studies of stomach ulcer and gallbladder patients were employed. In the course of taking these latter histories, all rheumatic manifestations were carefully sought and recorded. In this group, there was a population of 910 individuals whose definite disease histories were known. Of these, forty-five or only five per cent showed a rheumatic history. It would seem fair to assume that this figure represents the incidence of rheumatism in the general population.

Now then, if the immediate fraternities of the rheumatic fever patients are analyzed, it appears that there are 211 individuals in a group formed of the patients and their siblings. Of these 211 people, seventy-three or 34.6 per cent have suffered from rheumatism. In a study of fifty families of acute rheumatic fever made by the Constitution Clinic in 1923,¹⁷ 37.6 per cent of 243 patients and their siblings were found to be affected. A similar analysis of one hundred families studied by William St. Lawrence²² and to which he has very kindly given us access, shows 31.5 per cent affected fraternity members. Now, if the patients are excluded from the above figures and only their siblings considered, it appears in the present study that eighteen per cent are affected, in the second study referred to above, twenty per cent, and in St. Lawrence's 14.7 per cent. These figures approach the 12.4 per cent incidence in the population of the rheumatic families and are considerably higher than five per cent incidence for the general population. The close approximation of the findings in the three separate studies is remarkable. It should be stated that in the present study, nine of Doctor St. Lawrence's families have been reinvestigated and used.

In the present group of patients and fraternity members, there are 122 males and 89 females or a ratio of 137 to 100. The actual cases, however, occurred in 41 of the 122 males (33.5%) and in 32 of the 89 females (35.8%). Thus there appears to be a slightly higher incidence of affected females. Twenty-four of our families are represented by a male patient

and twenty by a female. This selection was purely accidental. If the number of patients is deducted from the total, the ratio of male to female fraternity members still remains high.

In seventeen of the families, rheumatism was found in the paternal line. In these families, twelve fathers give a personal rheumatic history. In the remaining five families, the disease appeared in the father's forebears and collaterals. In twenty-nine families, rheumatism appeared in the maternal line. In these families, seventeen mothers gave a history of rheumatism. In the remaining twelve families, the disease was present in the mother's forebears and collaterals. Hence, not infrequently an unaffected parent whose forebears or collaterals had rheumatism produces a rheumatic child. This suggests the possibility that a parent may carry the susceptibility for rheumatism though he or she may not develop it.

As the analysis of the rheumatic fever family histories proceeded, an unexpected finding was encountered which brings up for consideration the question of specific age susceptibility in children of the same fraternity. In twenty-two families where there was more than one case of rheumatism, exact information was obtained as to the age when clinical symptoms of

Family Number	Age Patient	Sib	Affected Sib	Sib
1	3	5		
2	5	6	5	
3	5	5	10	
4	6	6		
5	6	7		
6	6	7		
7	7	7	7	
8	8	8	8	
9	9	8+		
10	9	9-10		
11	11	11		
12	12	15	21	
13	12	17		
14	14	12	7	7
15	14	14		
16	16	16		
17	16	19		
18	17	5		
19	23	8		
20	35	21	23	
21	35	35-40		
22	30-40	30-40		

Fig. 17. Striking correlation between age of onset in members of same fraternity. (Rheumatic fever.)

Illustration by courtesy of Keegan, Paul Co. from *Disease and Man* by Macmillan.

rheumatism were first exhibited. Fig. 17 shows the striking correlation between age of onset in members of the same fraternity.

In only two of these families (2 and 14) have two children been affected simultaneously. In Family 2, it was during the patient's second attack that his youngest brother developed acute rheumatic fever. But it is noteworthy that this child was exactly five years old, the same age to a month, as was the patient at his first attack. The third brother to be affected had his attack during his sixth year. In Family 14, there appear both circumstances of simultaneous affection and also age similarity. The patient, a male, was taken sick first at the age of fourteen, his sister next in line in the fraternity at the age of twelve, a year earlier. The third child in line, a boy, was affected at the age of seven, three years earlier, and the fifth in line, a girl, also at seven, but in the same year as the patient. It is interesting to note that in Families 20, 21, and 22, where the first attack in the patient occurred in adulthood, the same age similarity appears in the affected siblings. This does not hold true for Family 19.

Thus, it would seem that the specific resistance against acute rheumatic fever tends to break down in members of a given fraternity at a definite age for that fraternity. It is difficult to interpret this phenomenon in any other way than as the expression of an inherited special "age-resistance" character.

The nature of this phenomenon is not yet clear, but it would seem to be similar to many other biochemical changes which occur in the organism at various ages. It is common knowledge, for example,

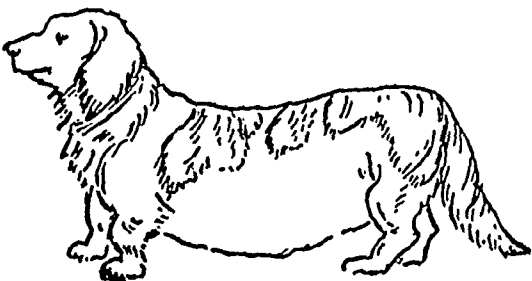


Fig. 18. Cross between a Great St. Bernard dog and a dachshund. After Lang (1914).

Illustration by courtesy of Norton & Co. from *The Biological Basis of Human Nature* by Jennings.

that the tendency to menstruate either early or late, or the time at which the menopause begins is often characteristic of all the women in a given family. Premature graying of the hair, baldness and the event of puberty are all related specifically to some age in the given family. Possibly the same principle underlies the relationship of certain disease-producing infectious agents to different epochs in the life of a human being. While these are roughly grouped as diseases of childhood, like measles, chicken pox, and poliomyelitis, or of middle life, like pneumonia, the age zones are not strictly circumscribed for the human species, but show remarkable variations which continually reappear in one or another family group.

There is another aspect of clinical genetics which still remains to be discussed. It relates to what may be called the appropriateness of the mating. Possibly this is simply another way of saying: "Will a given cross result in successful offspring." An extreme degree of inappropriateness, for example, is to be seen in the well known cross made by A. Heim and reported by Lang²³ between a Dachshund and a Great St. Bernard. The resultant creature (Fig. 18) is unsatisfactory from every point of view. Its long, heavy body and short legs prohibit speed and agility. Furthermore, if the heart and circulatory apparatus or kidneys follow that of the Dachshund, they would obviously be inadequate for the great body size of the St. Bernard and the animal would soon perish. Another instance of inappropriateness is that seen in Stockhard's cross between a Dachshund and a Boston Bull Terrier. Some of the individuals resulting from this cross possessed the long, pointed upper jaw of the Dachshund and the short, square mandible of the terrier. The mechanical inadequacy of this arrangement for mastication was so great as to require special care in feeding the animal. Free and unassisted in nature and in competition with other dogs at the food basin, this type would inevitably die. Such grossly misbuilt animals resulting from inappropriate crosses do not often find analogous expression in man. Human dwarfs and giants rarely mate. Whether this fact be due to a conscious sense of fitness or to the instinctive working out

of the principle of natural selection or to both is an open question. But, whereas it is clear that grossly malformed individuals usually die off, there are infinitely numerous poorly designed creatures who survive. The inadequacies in the constitution or personal identity of these persons may be of a degree which just permits survival. But they in turn are subject to every sort of maladjustment with their environments ranging all the way on one hand from mental defect through insanity to mild neuroses, and on the other from infectious disease and blood dyscrasias to easily breaking bones.

In the extreme examples from dog breeding given above, the species differences are so great that the inappropriateness of the cross is apparent to everyone. Furthermore, the handicap borne by the offspring is easily visible in the gross disproportions of anatomical structure. But there are many other similarly inherited inadequacies which are invisible concealed within a perfectly formed and unblemished exterior. An excellent example of this situation is provided by the parents shown in Fig 19.¹⁴ Another illustration from our records is the ex-

perience of a man and woman who made deliberately what they had every reason to hope would be a well-calculated eugenic mating. The man was highly intelligent, culture and physically sound, the woman unusually strong and very beautiful. The oldest girl child of this union apparently achieved the hoped for result. She was a rarely beautiful and intelligent child. But she died at eleven years of age from malignant endocarditis following a series of childhood infections, rheumatism, and damaged heart valve. Clearly, the child had received genes carrying unseen faults in the immunity mechanism. These faulty factors had been present, undisclosed in the parents. At present, we possess no means of detecting faulty genes which may be held within the chromosomes of individuals whose external appearance and conduct shows no undesirable irregularities. It may be, however, that increasingly sharp observation of a patient's personal identity or constitution will lead to correlations which will illuminate hidden faulty genes harmless to the bearer but menacing to the offspring.

It has been shown in discussing the first or egg stage of the human being

HEREDITARY CRYPTORCHIDISM

From Corbus and O'Connor

Family S

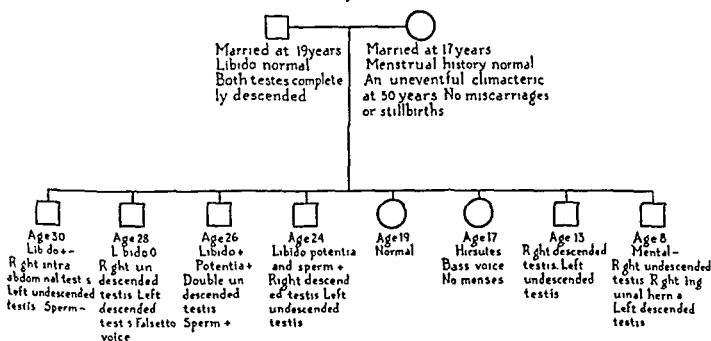


Fig 19 Showing intense distribution of congenital malformation when both parents are apparently normal. Probably an instance where each parent has a single defective gene and these defective genes are in the same pairs in each parent.

Illustration by courtesy of Surgeon, Gynecology and Obstetrics from *The Familial Occurrence of Undescended Testes* by Corbus and O'Connor.

that much valuable information about an individual can be gleaned from a careful genetic history. Occasionally, such a study illuminates a basic genetic mechanism which has been demonstrated by directed cross breeding. But in general the far greater service to the patient and his doctor comes from the deeper insight which knowledge of the family history gives to the latter. Not only does information about family characteristics and diseases help in the diagnosis and prognosis of an existing sickness but it pro-

vides some notion of the probability of future ailments. This knowledge may be derived sometimes from the patient's genealogy and sometimes when the information warrants it, from statistical study of groups of families. Beyond these essentially medical values of the family history, however, an historical background is provided which forms a sort of psychological tapestry into which the patient's figure and personal identity is colorfully woven.

33 E 68TH STREET

References

1. Draper, G.: Man as a Complete Organism—In Health and Disease. N. Y. STATE JOUR. MED., 34:1052, 1934.
2. Butler, S.: *Life and Habit*, New York, 1910.
3. Conklin, E. G.: The Mechanism of Heredity Science, 1908-27-89-99.
4. Siemans, H. W.: Die Verebung in der atologie der Hautkr. Handbuck der Haut u. Geschelechts Krankheiten, Vol. 3—Berlin 1929.
5. Draper, G., and Touraine, G. A. The Man-Environment Unit and Peptic Ulcer, *Arch. Int. Med.*, 49:616, 1932.
6. Pearl, R.: *Annal of Eugenics*, London, 1927.
7. Ashner, B.: Zur Erbbiologie des Skeletts systems, *Zeitschr. f. Konstitution lebre*, 14:129, 1928.
8. Garrod, Sir A. E.: *Inborn Errors of Metabolism*, Oxford, 1923.
9. Bauer, J., and Ashner, B.: Zur Kenntniss der Konstitutions defekte des Peripheren Bewegungs apparatus, *Zeitschr. f. Konstitutions lebre*, 10:592, 1925.
10. White and Pinkus: On the Inheritance of Diabetes Mellitus, *Amer. Journ. Med. Sci.*, 126:1, 1933.
- 10a. Bridges, C. B.: Salivary Chromosome Maps, *Journal of Heredity*, 26:60, 1935.
11. Morgan, T. H.: *The Physical Basis of Heredity*, Philadelphia, J. B. Lippincott Co., 1919.
12. Jennings, H. S.: *The Biological Basis of Human Nature*, New York, W. W. Norton & Co., 1930.
13. Castle, W. E.: *Genetics and Eugenics*, Cambridge, Cambridge Press, 1921.
14. Babcock, E. B., and Clausen, R. E.: *Genetics in Relation to Agriculture*, Second Edition, New York, McGraw-Hill, 1927.
15. Bulloch, Wm., and Fildes, P.: *Hemophilia*, Eugenics Lab. Memoirs XII, London 1911.
16. Draper, G.: Loc. cit.
17. Dublin, L. I., Fiske, E. L., and Kopf, E. W.: Physical Defects as Revealed by Periodic Health Examination, *Amer. Journ. of Med. Sci.*, 170:576, 1925.
18. Draper, G. and Touraine, G. A.: Loc. cit.
19. Ruhmann, W.: *Der Ulcuskranke: Studien zur Konstitution und Symptomatik am gesamten Status bei chronischen Ulcus pepticum mit besonderer Berucksichtigung des vegetativen Nervensystems*, Berlin, S. Karger, 1926.
20. Aschner, B.: Ueber Konstitution und Vererbung bei Ulcus ventricule und duodeni, *Ztschr. f. d. ges. Anat.*, 9:6, 1923.
21. Spiegle, E.: *Deutsches Arch. f. klin. Med.*, 126:45, 1918.
22. St. Lawrence, William: The Family Association of Cardiac Disease, Acute Rheumatic Fever and Chorea. A Study of 100 Families, *J.A.M.A.*, 79:2051, 1929.
23. Lang, A.: *Die Experimentelle Verebung-slehre in der Zoologie Zeit 1900*, Vol. I, page 227, 1914.
24. Corbus, B. C. and O'Connor, V. G.: The Familial Occurrence of Undescended Testes, *Surg., Gyn., and Obst.*, 34:237, 1922.

NOTICE TO AUTHORS OF PAPERS

Members of the Section on Dermatology and Syphilology of the State Medical Society are requested to submit titles of their proposed papers before January 1, 1936 to either the secretary or chairman of the section.

The scientific session takes place on the mornings of April 28th and 29th, 1936. Louis Tulipan, M.D., 224 East 17th Street, New York City, is Chairman, and Clarence H. Peachey, M.D., 197 South Goodman Street, Rochester, Secretary.

MEDICAL RADIO BROADCASTS

Dr. W. W. Bauer will speak on "Animal Diseases in Man" on December 17, on "Eat, Drink, and be Merry," on December 24, and on "Pneumonia" on December 31 in the

series of broadcasts of the American Medical Association on the National Broadcasting Company's blue network. The addresses are on Tuesdays, at 5 P. M. E.S.T.

TREATMENT OF PNEUMONIA

ARTHUR F. CHACE, M.D., *New York City*

In the past decade there have been over a million deaths from pneumonia in the United States alone. Among infectious diseases lobar pneumonia has ranked second only to tuberculosis, as a cause of death. It is largely an unpreventable disease. Intensive study has developed means by which the suffering of the patient has been ameliorated, and the death rate reduced by symptomatic treatment and by the use of sera. The treatment is more nearly standardized than that of any other infection.

There is a definite relationship between fatigue and resistance to infection. Physical and nervous exhaustion increase the incidence of pneumonia and decrease the ability of the body to withstand the invading organism. About one-half of the patients suffering from pneumonia give a history of having had a "cold" at the time of the onset of the disease. The elimination of all forms of common colds, if ever achieved, will greatly reduce the incidence of pneumonia. It is especially important in this disease, which is as communicable as typhoid, that great precaution should be observed by those coming into contact with it. Bed linen and towels should be carefully handled, masks and gowns worn when possible and extreme care given to the washing of the hands.

The development of immunity against the pneumococcus through the use of vaccines has not proven practical. A temporary, relative immunity, lasting for a few months, has been developed against certain types of pneumonia.

The pneumonia patient should be isolated in a well-ventilated room where the air should be kept fresh, flowing, and at a bracing, moderate temperature. The rigid, open-air treatment has been largely abandoned although moderately cool air is stimulating to the vasomotor system.

The nursing is an all important factor, as is the necessity of sufficient rest and sleep. The taking of the respiration and pulse should coincide with the time for nourishment and treatments, so that the patient may have periods of two or more hours of uninterrupted rest. The diet

should consist of fruit juices, cereal gruels, milk, and broth to which cooked rice or barley has been added. The caloric value of the diet may be increased by adding milk sugar to the fruit juices, while the fermented milks add variety to the diet. If the tongue is dry and furred it is advisable to force liquids in order to avoid dehydration. The coating of the tongue indicates that less protein and more fruit juices should be given. As a rule the patient responds best to a high carbohydrate diet. The use of large amounts of fruit juices also has a laxative effect on the bowels. Where there is evidence of intestinal toxemia, as shown by a coated tongue, bad breath, indicanuria and constipation, it is wise to give a cathartic of either calomel or blue mass, followed by a saline. The bowels should move daily, an enema being used when necessary.

In case of abdominal distention it is well to give from $\frac{1}{2}$ to 1 c.c. of surgical pituitrin hypodermatically, simultaneously with the enema. The pituitrin stimulates the smooth muscle fiber of the heart as well as that of the bowel. The dose may be repeated daily. The application of turpentine stupes is one of the best stimulants for peristalsis. A rectal tube inserted and allowed to remain in situ allows the escape of gas from the lower bowel.

Pleuritic pain is sometimes relieved by immobilizing the chest or by the application of a poultice, although it is frequently necessary to resort to hypodermics of morphine or codeine.

For the control of insomnia and delirium, bromides or one or other of the barbitol family are very useful. The bromide and chloral mixtures control the active deliriums more effectively than the barbitol groups.

The recent work showing the beneficial results in the treatment of infections by artificially produced fever, emphasizes the opinion that a rise in temperature is one of the means that the body uses to combat infection. If this is the case, it is wiser to lower the temperature by artificial means only in those cases definitely suffering

from the pyrexia. In such instances the ice-cap or the alcohol sponge-bath may be used for symptomatic relief.

There is no wholly satisfactory expectorant as most of those in common use upset the digestive tract and have no noticeable effect on the character and amount of the bronchial secretion. Ammonium chloride, in small doses, is perhaps the most effectual. The irritating cough is relieved by giving dilauidide in grains $1/32$, or codeine in grain $1/4$ every four hours, as indicated.

The rate of the heartbeat bears a definite relationship to the prognosis. The more rapid the heart-rate, the less chance there is of recovery. Frequent electrocardiographic tracings, taken before and after the crisis, indicate many changes in the cardiac rhythm. These tracings show that the heart is subject to nearly every type of arrhythmia. The most common ones are: auricular fibrillation, auricular-ventricular block, sinus rhythm and auricular flutter. Digitalis is the best drug for the support of the heart in pneumonia, but it should not be given as a routine for it may then do harm. Its use should be limited to definite indications and the dosage should be prescribed for the specific needs of the individual case. It is most efficacious in auricular fibrillation. Electrocardiographic tracings have been of the greatest aid in evaluating the usefulness of digitalis in pneumonia. The frequency with which arrhythmias increases after the crisis emphasizes the importance of keeping the patient in bed until the myocardium has had an opportunity to recover. Inasmuch as the most frequent cause of death in pneumonia is circulatory failure, either from vasomotor paralysis or from cardiac weakness, it is necessary to supplement the use of digitalis in extreme cases needing emergency stimulation with either adrenalin chloride or caffeine. Strychnine, strophanthus, and camphor have been almost entirely discarded. The use of alcohol is limited to those whose systems have previously been accustomed to it.

Inhalation of oxygen gives the patient more relief than any other agent which we have at our disposal. By its use breathing is eased and the respiratory rate lowered; cyanosis disappears almost entirely, and the pulse improves in quality.

It is probable that in a few cases it actually prolongs life until the patient can build up an immunity against the disease. In a few hospitals, a patient may be placed in a specially built oxygen chamber which is the ideal arrangement. Often only a portable oxygen tent is available, in which the oxygen can be used under the same conditions as in the chamber. However, it is not only practicable but thoroly satisfactory to use a nasal catheter connected by the proper valves and water bottles to a large oxygen tank. The containers of oxygen used for commercial purposes are more satisfactory than the small so-called medicinal tanks. The passage through the water moistens the oxygen and determines its rate of flow. The patient is given forty to sixty per cent of oxygen depending on the amount necessary to relieve his cyanosis. By the old funnel method the oxygen was administered in such small quantities that it was of no benefit to the patient.

Artificial pneumothorax has been used in the treatment of acute lobar pneumonia since 1919. In the last few years it has been the subject of intensive study in various parts of this country. The technic is complicated and the volume of air required is variable. The procedure is not without danger. Introduction of air into the pleural cavity relieves pain and dyspnoea and sometimes causes a temporary drop in temperature. The best results are obtained when cases are treated in the early stages. It has been hoped that the immobilization of the lung would hasten the absorption of serum, lessen anoxemia, stimulate the formation of antibodies, and free the infected occlusion in the involved bronchus. It is still in the experimental stage. Artificial pneumothorax is limited in its usefulness and should be employed only by those most experienced in its use.

When the lung is invaded by the pneumococcus, the defensive systems of the body form immune substances consisting of precipitins, protective bodies, opsonins and agglutinins. These immune bodies are bactericidal and are found in the blood serum of animals inoculated against the pneumococcus as well as in the blood stream of the patient suffering with pneumonia. At the time of the crisis the blood contains the maximum amount of immune bodies. The crisis can be induced

in Type I pneumonia by the administration of Type I anti-pneumococcus serum thereby greatly reducing the mortality in these cases. The benefits in Type II are definite but not as striking as in Type I. The effectiveness of serums in the other types of pneumonia including Type VII, have not been sufficiently demonstrated to warrant their use by the general practitioner. The problem has been to make for Types I and II a refined, potent serum of low protein content to produce a minimum of unfavorable reaction.

About thirty two varieties of lobar pneumonia have been typed. Serums of some efficiency have been developed, particularly for Type VII and Type VIII. It is impracticable to have available for immediate use serums for the rarer types. Up to the present time there is no effective polyvalent serum. The work of Avery, in discovering an enzyme which will dissolve the capsule of the pneumococcus, particularly in Type III, holds out possibilities of future development. The use of these pneumolysins, in destroying the pneumococcus, opens up new vistas in scientific research which may in time revolutionize the present treatment of the disease.

It is imperative that the type of pneumonia be determined as promptly as possible after a diagnosis of lobar pneumonia has been made. A history of serum sickness, allergic phenomena, hay fever or asthma should be a warning for unusual care in the use of sera. The patient should be tested by the placing of a drop of 1/10 c.c. horse serum on the conjunctiva and if the result be doubtful an intradermal injection should be given. If these tests are negative 5 c.c. of concentrated serum may be injected slowly, intravenously. Two hours later 20 c.c. may be given in the same way. If the patient reacts favorably, the dose may be repeated until a total of 100,000 units or more have been given, the amount being determined by the severity of the case. Twenty four hours later, if the patient has improved, about one half the dose should be given. On the other hand, if the patient is worse, the doses should be increased. It is frequently necessary to give serum again on the third day. It is wise to have epinephrine available to be used in case of an unfavorable reaction. This should

be used hypodermatically in a $\frac{1}{2}$ c.c. dose of an 1/1000 solution. The symptoms of the allergic reaction occur immediately and are shock, dyspnoea, sweating, collapse and urticaria. The thermal reaction due to the introduction of foreign proteins into the blood stream, has been greatly reduced since the development of refined sera. The reaction occurs about one hour after the injection of the serum and consists of a chill followed by a rise in temperature which remains high for a few hours and then drops suddenly accompanied by profuse perspiration. The incidence of serum sickness depends largely upon the amount of protein injected. It develops on about the ninth day and is characterized by fever, urticaria and painful, swollen joints. It is treated symptomatically by the use of alkalis, catharsis and soothing lotions, and is usually of only a few days duration.

The most common complication in lobar pneumonia is acute fibrinous pleurisy, which is best treated by immobilization of the chest through strapping, and relief of the associated pain by the use of codeine. Small effusions are usually absorbed but it becomes necessary to withdraw the fluid when there is definite compression of the lung. If the fluid becomes purulent, surgical drainage is imperative. Delayed resolution is particularly apt to occur in elderly patients and necessitates long periods of careful nursing and the use of symptomatic remedies.

Rest in bed is essential until not only the lung has completely resolved but the myocardium has entirely recovered from the infection.

Many factors determine the prognosis in pneumonia. The death rate is about thirty per cent the chance of recovery being greater in the young than in the aged. Certain types of infection are more serious than others. The mortality rate is higher in Type III and lower in Type I. The statistics vary somewhat from year to year. The number of bacteria found in the blood stream is an index of the gravity of the case. The smaller the area of involvement in the lung the greater the chances of recovery.

Summary

The advances in the treatment of lobar pneumonia may be summarized as fol-

lows: more intelligent use of the cardiac stimulants, particularly the indications and dosage of digitalis, made possible by the information obtained by electrocardiographic tracings, the more efficient use of oxygen therapy, and the administration of refined sera in Type I cases and, to a lesser extent, in Type II.

Successful treatment of pneumonia follows the best traditions of the medical profession in that the physician treats the

man who suffers from the disease as well as the disease itself. This requires careful nursing, making the patient as comfortable as possible and installing in him an optimistic spirit.

Although the most dreaded of all diseases has not yet been conquered, each year pneumonia becomes better controlled, the mortality rate is reduced and the realization of its ultimate eradication draws nearer.

525 PARK AVENUE

CUTANEOUS CALCINOSIS

MAURICE J. COSTELLO, M.D., *New York City*

In the past decade more cases of abnormal calcification, especially cutaneous calcinosis, have been reported than in the previous fifty years when it was first described by Weber in 1878. It is generally known that calcification does not occur in normal tissue, except in bone and cartilage and in metastatic calcinosis where there is a depletion of the calcium reserve.¹ Dead, diseased, or degenerated tissue that is not absorbed will undergo mineralization, usually by infiltration with calcium salts. This is a matter of common experience at necropsy when deposits of calcium are seen in various organs, in caseous tuberculous nodules of the lungs, in antecedent fat necrosis involving the aorta and cardiac valves, and in the pleura.

The clinical appearance of cutaneous calcinosis (*calcinosis circumscripta*) which means the abnormal deposition of calcium salts in or under the skin, varies but little in the descriptions given by the several observers. Nodules, plaques, and tumors are seen varying in size from a pin head to a filbert. They are usually of stony hardness and occur most frequently on the palmar aspect and sides of the thumb and first two fingers, on the palms, the extensor aspect of the elbows and knees, and at the wrist and ankle joints. They are almost invariably situated over or along the course of the flexor tendons of the hands, and the extensor tendons of the elbows and knees. They are seen in locations subject to frequent trauma and repeated muscular activity.

At the onset, the skin over the nodules is normal in appearance, and as the lesions enlarge they become painful. The inflamed skin adheres to the lesions, which later break through and sluggishly discharge a white creamy material with small gritty particles of calcium. After a considerable time the tumors decrease in size. They will disappear if all the calcium is evacuated but usually recur to repeat the process.

Pathologic calcification, evidenced by the precipitation of calcium salts in secretions and excretions, is understood. I refer to urinary and biliary calculi. Much less is known about the deposition of calcium salts in the tissues and especially in the skin, as in cutaneous calcinosis.

Cutaneous calcinosis may be local or general. In the local form calcification is seen in tumors such as epithelioma, sebaceous cysts, etc. In the general or metastatic form increased amounts of calcium are found in the blood resulting from constitutional diseases, such as osteomyelitis with extensive bone destruction, caries, and lymphatic leukemia. In metabolic calcinosis there is no bone destruction.

Chemical examination of the nodules, according to Maloney and Bloom,² showed the presence of a large amount of calcium phosphate and a small amount of calcium carbonate. The computed ratio of the different examinations by the various observers was approximately 7-1. Several writers have reported a predom-

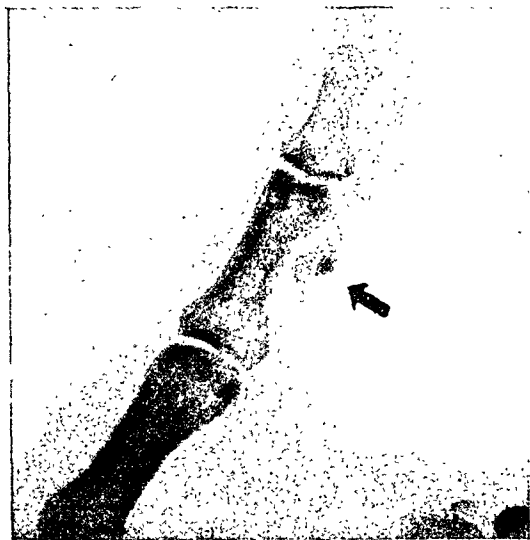
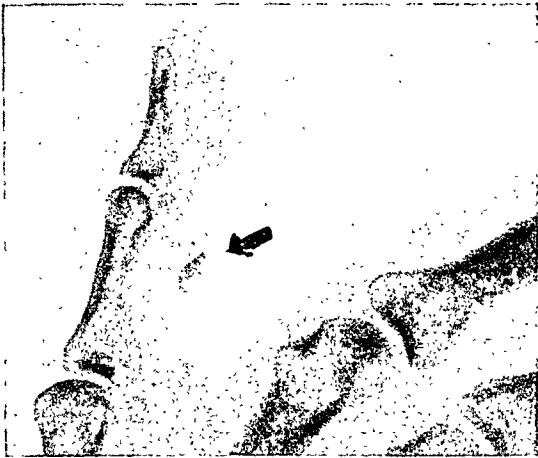
nance of calcium carbonate

Weidman and Shaffer³ in a careful and painstaking study reported the presence of intracellular and extracellular infiltration of calcium in the epidermis. The collagen bundles of the corium were similarly altered, as were the lumina of the blood vessels, the endothelial cells of the capillaries, veins and arterioles. All the layers and structures of the skin were involved except the sebaceous glands. Calcium was found in the sweat glands and ducts, Pacinian corpuscles, nerve trunks, and corium. The important point was that the calcification was intimately associated with infiltration of fat. Their interpretation was one of an antecedent fatty alteration followed by eventual calcification.

Nearly all the cases of metabolic calcinosis except this report show a normal blood calcium. Those of the metastatic group resulting from bone resorption show a high amount of blood calcium.

The age of the patients ranged from





two weeks to sixty-five years, the infants less than one month probably presented a condition of subcutaneous fat necrosis of the new born. In adult cases women seem to be more often affected than men.

Other diseases have been associated with cutaneous calcinosis—tuberculosis of the lungs, rheumatism and rheumatoid arthritis, osteomyelitis, caries, chronic nephritis, and lymphatic leukemia. Scleroderma and sclerodermatous changes are frequent accompanying clinical manifestations, as are Raynaud's disease and arteriosclerosis.

Thomas, in discussing the case of Weidman and Shaffer, reported that a fourteen year old boy with metastatic calcinosis at autopsy had markedly enlarged parathy-

roids. Hubbard and Wentworth's⁴ patient also had hyperplasia of the parathyroids.

Metastatic calcinosis, when accompanied by constitutional disease such as osteomyelitis, lymphatic leukemia, and parathyroiditis has a poor prognosis, the outlook depending on the associated condition. In the metabolic cases the outlook as to life is good.

Case Report

N.D., a white unmarried woman, aged 44, was first seen by Dr. Howard Fox on September 5th, 1929. Since early childhood she had profuse nose bleeds on the average of three times a week. These continued until her late adolescence. Even now she has a nose bleed when fatigued.

Coldness of the hands and feet and generalized chilliness, especially at night have been almost a constant annoyance since childhood.

Typical Raynaud's phenomena have been experienced by the patient since the winter of 1918. She had marked blanching and numbness of several fingers and toes, followed by cyanosis and tingling of the parts affected. She had a radical antrum operation in April, 1924. In 1925 her tonsils were removed and a few teeth were extracted for the relief of headaches. She also had a

	Normals	June 8 1932	Sept. 19, 1933	Feb. 5, 1935	April 12, 1935
	mgm.	mgm.	mgm.	mgm.	mgm.
Blood calcium.....	9-11	17.5	14.2	11.4	10.1
Totals phosphorus..	3.7	....	4.8	6.4	7.76
Inorganic serum phosphorus.....	3.5-4.25	....	....	3.38	3.78
Phosphatase.....	1.5-4	....	....	3.02	*3.93
Sugar.....	60-120	97.0	90.	105.0	125.
Non-protein nitrogen	25-40	32.6	30.0	27.2	31.2
Urea nitrogen.....	12-15	16.3	15.0	13.6	15.6
Uric acid.....	2-4	4.6	2.8	3.2	3.6
Creatinine.....	0.5- 2.0	....	1.0	1.0	1.0
Na Cl.....	450-500	....	465.0	444.0	.....

*Bodansky.

	March 17, 1933	March 7, 1935
Hemoglobin.....	85%	84%
Total red cells.....	4,600,000	4,710,000
Total white cells.....	4,400	3,800
Neutral polymorphonuclears.....	....	47.
Eosin polymorphonuclears.....	....	1.
Basophilic polymorphonuclears.....	....	....
Lymphocytes.....	....	50.
.....	....	1.
.....	....	1.
.....	3 mm.	....
.....	+13	0

herpes zoster of the right side of the neck. She has always had a low blood pressure. Her menstrual life has been essentially normal except in 1922 when she had severe pain and irregularity which was easily corrected in a short time.

When seen in 1929 the patient stated that she had had a skin condition for almost four years. It began as small lumps, the first the size of a pea on the left elbow which appeared gradually, was accompanied by pain, and excised at the end of six months. Three others followed in the same location and were also removed surgically. The pathological examination was said to have shown old tuberculosis. This was probably similar to the histological picture seen by Tipl,⁵ Milian,⁶ and Lewandowsky,⁷ who found foreign body giant cells. She also had one on the tip of the index finger of the right hand and one on the internal malleolus of the left ankle.

Raynaud's phenomena have continued since 1929 and pea to coin sized painful and painless nodules and plaques have developed slowly, the pain depending on the location and stage of development of the nodules. These occur on the tips, palmar aspect, sides of the thumbs and first two fingers and the palms, those parts used most frequently and subjected to repeated trauma.

Generalized arthritic pains with swelling and thickening of the fingers and toes, and an increase in the size of the hands and feet are the patient's greatest complaints. Five years ago she wore a size five glove, she now wears a seven and a half.

The patient works daily and is very active although annoyed by the painful nodules, swelling of the hands and feet, arthritis, and an almost constant feeling of fatigue. She also has a grapefruit sized lipoma on the left buttock, but thinks that this followed an injury in childhood.

Her mother, who died at the age of 71, at necropsy showed marked atheromatous changes in the arterial vessels of the brain and a number of atheromatous plaques on the mitral and tricuspid valves, and the aorta. This loses its significance in a woman of this age. Her father died of angina pectoris; one sister is living and is in poor health; her sister's son, aged 12, also has had frequent profuse nose bleeds.

In the treatment of cutaneous calcinosis, it is first necessary to make the patient as comfortable as possible by incising the skin over the painful nodules under local anesthesia. About a dozen nodules have been treated in this manner. It is best to make an incision and then try to remove the nodule in toto. Not infrequently, before this is possible, a creamy material is dis-

charged and the calcium stone itself becomes fragmented in endeavoring to remove it. I have found it necessary to thoroughly curette the base, the surrounding skin and the sides of the wound to break up the calcium infiltration of the skin. The wound is allowed to drain without suture. It heals slowly, sluggishly discharging small granules of calcium. It is important to remove all the particles of calcium, as, if any are allowed to remain they will act as a "catcher" for the further deposition of calcium salts and the operation will have to be repeated.

Large doses of x-rays, both filtered and unfiltered, had no effect in arresting the progress of a lesion or in curing it.

A half dollar sized calcium plaque on the right knee became definitely softer with a tendency to break down after ten diathermy treatments.

The salicylates were given for the arthritic pains with moderate relief. Disodium phosphate (2 grams, three times a day) as recommended by Craig, Lyall,⁸ and Kennedy,⁹ after a trial of several months had no effect on the lesions.

There is a possible relationship between the arrest in the development of new nodules and the dietary suggestions such as fat, salt, and calcium poor diet.

In the past ten years there have occurred on the face, neck, chest, extremities and the mucous membranes of the lips a number of sparsely distributed, smooth, non-elevated, rectangular and oval patches of telangiectasia. They vary in size from a pin point to that of a twenty-five cent piece. The bony configuration is somewhat asymmetrical and there has been gradual thickening of the features.

Summary and Conclusion

A typical case of the metabolic form of cutaneous calcinosis has been observed, studied, and treated over a period of six years.

This patient has two rare diseases cutaneous calcinosis and multiple hereditary telangiectasis with recurring hemorrhage.

Raynaud's phenomena, painful calcium nodules in the skin, a lipoma, arthritis and a high blood calcium when first observed, followed by a normal blood calcium later and a leucopenia are the high lights of the study.

Trauma, local nutritional disturbance caused by Raynaud's disease, increased

muscular activity and changes in the blood calcium, phosphorus and cholesterol are among the known factors influencing the deposition of calcium in the skin. The exact mechanism is imperfectly under-

stood. This case differs from the others reported in that the blood calcium was high in the beginning and gradually returned to normal.

140 EAST 54TH ST.



Photomicrograph of cutaneous nodule (hematoxylin eosin, 2% silver nitrate stain)



Photomicrograph of cutaneous nodule (silver nitrate stain)

References

1. Davis, A. H. and Warren, Shields: Calcification of the Skin in Diabetes Mellitus, *Arch. Path.*, 16:852, 1933.
2. Maloney, E. R. and Bloom, David: Cutaneous Calcinosis: Report of a Case, *Arch. Derm. & Syph.*, 23:245, 1931.
3. Weidman, F. D. and Shaffer, L. W.: Calcification of the Skin, Including the Epidermis, in Connection with Extensive Bone Resorption, *Arch. Derm. & Syph.*, 14:503, 1926.
4. Hubbard, R. S. & Wentworth, J. A.: Case of Metastatic Calcification with Chronic Nephritis and Hyperplasia of Parathyroids, *Proc. Soc. Ex. Biol. & Med.*, 18:307, 1920-21.
5. Tilp, A.: Demonstration eines Falles von ausgedehnter Calcinosis, *Verhandl. d. deutsch. path. Gesellsch.*, 7:277, 1910.
6. Milian: *Presse Med.*, 8:414, 1900.
7. Subcutane und Virchow's Arch.
8. Craig, J. and Lyall, A.: Calcinosis Universalis: Suggested Method of Treatment, *Brit. J. Child. Dis.*, 28:29, 1931.
9. Kennedy, R. L. J.: Calcinosis, *Proc. Staff Meet. Mayo Clinic*, 7:329, 1932.

Discussion

DR. DAVID BLOOM, *New York*—The case reported by Dr. Costello resembles clinically very much the case reported by Dr. Maloney and myself (*Arch. Dermat. & Syph.*, Feb. 1931). The essential differences between the two cases in findings which may be of etiologic importance are: the presence of signs of endocrine disturbance and a history of severe nephritis, the apparent association with Osler's hemorrhagic telangiectasia and an increased calcium content of the blood in the case reported by Dr. Costello. The difference in the last finding between the two cases may be explained by the fact that in our case the affection was of seven years duration, and the calcinosis, as we have described it, was an end result of the disturbance of calcium metabolism which was brought on by the severe nephritis seven years previously.

I feel certain that in the beginning of his illness the calcium content of the blood was high.

I consider the report of this case of great value because of its thoroughness. Calcinosis metabolica is a rare disease and its etiology still obscure. There is disagreement regarding the exact pathogenesis of the formation of the calcium tumors. Any facts observed in association with this affection may some day throw light on the etiology. These cases, when observed early enough, should undergo a thorough examination for calcium metabolism, when put on a diet either rich or poor in calcium. Such cases should also stimulate the physiopathologist in finding adequate methods for the elucidation of the calcium metabolism in the body.

HOW THE "WASHINGTON PLAN" IS GOING

The Washington Plan of medical care has become so well-known nationally that its coordinator, Ross Garrett, has been called upon by the medical and dental societies of St. Louis, Missouri, and Newark, New Jersey, to help them establish similar plans which are now under way. In addition, Mr. Garrett is working by invitation on surveys for the professions of 15 other large cities that desire to use the Washington plan in whole or in part. The main interest very naturally lies in the Medical Dental Service Bureau unit of the Washington plan, and it is, therefore, of interest to note that from an humble beginning of \$1,974.90 in gross revenue for March of this year its business has increased to a point where it touched \$14,673.82 for its maximum month. That the sponsors' fondest hope for a gross revenue of \$120,000.00 for the first full year of operation is to be

very greatly exceeded, is gleaned from the published report of the Bureau's Board of Directors showing \$84,989.95 in gross revenue for the first 7 months. Of this amount, 52 per cent came from all members of the professions and 48 per cent from hospital patients.

A surplus of \$1000 in September was used in part for ethical publicity and business development, and resulted in a large increase in new business. Furthermore, as we read in the *Medical Annals of the District of Columbia*: "The staff at the Bureau is daily receiving letters of commendation from members of the professions and patients whom it has had the opportunity to serve. The hospitals have been unstinted in their praise for the situation the professions have helped to create for them in handling many classifications of their work."

NEW YORK STATE JOURNAL OF MEDICINE

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EDITORIALS

Anent Social Service

Social service is the application of a newer science which purports to study all phases of the individual's needs. In making studies of these needs, the accumulated experiences of the past must be comprehended, and where found to be good, affirmed. The development of the civilized state brought with it a larger knowledge of what has been termed "the humanities," and this is playing a larger role as sociological science develops. Medical service is the greatest factor in the practical application of social science, because in the practice of medicine there is found a combination of applied scientific measures, coupled with a knowledge of the effect of both social and of economic factors upon the personality of a sick individual. Wisely to practice medicine is to apply the scientific knowledge to the individual's needs adjusted to his social level and economic resources.

Under these circumstances it seems strange that most of the educational institutions which train and qualify social workers do not utilize to the utmost the particular fitness of the medical trained observer in teaching social science. Because of this lack, it is not surprising that the results of the work of most social research lack the insight which the medical philosopher could contribute.

Revision of the teaching schedules along such lines would strengthen the students taking social service courses and remedy this lack of comprehension of medical fundamentals of service.

Observers, trained medically as well as in other branches of the humanities, would be less inclined to stress schemes for cheaper medical care, but would know that the maintenance of the highest scientific quality in medical care must always be a primary consideration, and that all social schemes must be submitted to this test, which can under no circumstances be involved in compromise. Social workers and research students trained thusly, would put less emphasis on surveys of illness and disease, and more stress on studies to eliminate deleterious factors concerned with food, clothing, housing, and working conditions.

Comprehension of steps to eliminate unsanitary housing, living and working conditions would do more to lessen incidence of disease than almost any other social activity; and it would do much to better the fine record written in mortality and morbidity and preventive medicine by the American medical profession.

We have, upon occasion, criticized the poorly trained social worker. As a profession we have had to combat his make-shifts to social reforms, predicated upon

unsound premises. These men are hardly at fault. The error lies in the training they receive. Can we not confidently expect that the great institutions of education,—that our universities will recognize this lack in fundamental training and remedy it?

In the evolutionary phases which social service, including medicine is undergoing to meet the demands of the new era of cooperative endeavor which is upon us,—there will be place and position for those who study the individual's needs and learn the formula of how best to supply them under our parliamentary system of government.

The Compensation Schedule

In accordance with statutes enacted last spring, the Medical Society of the State of New York has submitted a complete schedule of medical fees to the Department of Labor. The proposed charges cover the entire range of compensation work, establishing a differential fee scale according to time and place and the nature of services rendered.

The moderation of the suggested schedule reflects the sincerity of the profession's desire to see the medical aspects of workmen's compensation established on a high ethical and scientific plane. Organized medicine realizes the financial limitations of a system supported by insurance funds and has made substantial concessions to these limitations.

The progress of compensation would be materially hastened by establishment of the minimum fee scale required by law. Having made generous concessions in the interests of the injured worker and industry, the profession hopes that its proposed schedule will be accepted without drastic change or delay.

Most of the rank abuses in workmen's compensation grew out of the suppression of fair medical competition. The new law provides for the free choice of physicians but unless an adequate scale of minimum fees is fixed, competent practitioners will refuse to participate in industrial work

and the field will be overrun, as before, by the incompetent, the inexperienced and the dishonest.

There is a financial level below which painstaking service cannot be rendered, save at a loss. Any drastic reduction in the scale submitted by the State Society would send compensation fees below that level and invite incompetence and corruption.

The Hospital as the Center of a Social Service

Dean Rappleye of the College of Physicians and Surgeons, Columbia University in his recent report to the President of the University, stated that American hospitals must be adequately financed on a community basis and their function more closely adapted to present day needs. He stressed the fact that the hospital represented a base of operations for all forms of community medical services, that it had a type of medical organization readily to be amplified to cooperate in home nursing and home medical services through its out patient service and other channels. It is the most satisfactory means to preserve high standards of professional performance.

While at this time it is not our intention to elaborate and critically examine all the implications which the plan outlined by Dean Rappleye entails yet using the outline of the hospital as the community's health center for a workable idea, certain fundamentals may be discussed.

In the first place, all recognized, ethical physicians must be attached to the hospital staffs. The necessity of this is obvious. In the second place the hospitals should be supported by government subsidy, and the physicians working in them, serving the indigent of the community should be paid. This should be accepted in principle for both the hospitals maintained by taxes, and also for the voluntary hospitals. The latter carry part of the community's burden, in caring for indigents who cannot be accommodated in tax maintained hospitals.

This is particularly true in New York City. Furthermore, this will alleviate the needs of the younger group of medical men who, just starting upon their medical careers, will, in return for good high grade medical services delivered under the eye and supervision of their seniors on the hospital service, receive a subsidy in the form of pay for services rendered to the wards of the community. Since the adoption of the Booth report we have held that the indigent are a proper charge upon the community funds raised by taxation, and the physician should not be twice taxed, once for his share as a citizen of the community and again as a group,—doctors—taxed in services given gratis, when all other groups concerned with the indigent's case are paid.

Lastly, regulations should govern the subsidy. Taxation can sustain, control, and also destroy. It is a potent weapon. Here it should be used to control practices upon which the organized profession frowns. Hospitals should not engage in active competition for public patronage. They should never be run for a profit. Every rule of conduct enacted for the protection of the public and heretofore obligatory upon individual physicians should be made to apply to the hospital. Advertising, solicitation, self-aggrandizing praise, exorbitant claims of superior service,—and "cut-rate" fees must be obviated. There must be no lowering of the high standards of medical practice, but rather continued efforts to enhance these standards.

With such fundamentals disposed of, the proper study of the plan to make the hospital the health unit of the community may be started. The outline scheme contains none of the un-American implications which have been presented in other schemes.

$$2 \times 1 = ?$$

The Federal Resettlement Administration headed by Rexford G. Tugwell has put the multiplication table to some strange uses. Up to the middle of

November the twelve thousand and more administrative workers in this unit had provided only 5,072 relief jobs. Two times one, in this case, is an understatement of the number of bureaucratic employees required to put a man to work under the national resettlement program.

The higher multiplication tables must be invoked when the question of compensation is studied. In November relief workers engaged by the Resettlement Administration were receiving \$300,000 a month in wages. Multiply this figure by five and you are still a quarter of a million short of the monthly salaries paid the administrative force. In other words, when the intrinsic costs of work are multiplied by bureaucratic expenditures, the result is something to make the taxpayer sit up and take notice.

Mr. Tugwell's aides explain that seasonal difficulties prevent full employment under the Resettlement Administration at this time. Even when the peak is reached, however, it is estimated that there will be one administrative official to every twelve relief workers—a rather high overhead for an employment service!

The situation in the Resettlement Administration is a repetition of European experience with compulsory health insurance. In Germany the Krankenkassen employ almost as many administrative workers as physicians. In England bureaucratic expenses consume a substantial portion of the insurance fund each year. The nation's allotment for health purposes is depleted by the upkeep of a vast bureaucracy which does nothing to improve the level of medical care but interposes a vexatious mass of red tape between doctor and patient.

Compulsory health insurance does nothing that cannot be accomplished by systems like the Geib-Vaughn plan—and the latter does not require a costly administrative bureaucracy. American labor should consider whether it is worthwhile to support a directorial set-up like that in the Resettlement Administration in return for the dubious promise of compulsory health insurance.

The Bactericide of Surgical Maggots

The use of surgical maggots in the treatment of suppurating cavities, particularly those involving the long bones, has yielded gratifying results in a large proportion of instances, but the nature of the curative property possessed by maggots in their action against pyogenic infections has been an undetermined factor. It is of particular interest, therefore, that Simmons¹ has been able to obtain a potent bactericidal principle from surgical maggots, which, *in vitro*, is capable of killing completely all organisms in saline and broth suspensions.

Unlike the ordinary disinfectants now in common use, the material obtained from the maggots exhibited a lesser decrease in potency following the addition of organic material to the broth cultures. The exact mode of action by which this substance destroys bacteria is as yet not clear. That it is not a bacteriophage has been demonstrated by its thermostability and by other reactions. It does not cause the death of organisms by lysis. In itself, it is nonviable and cannot be destroyed by the ordinary process of autoclaving for twenty minutes at ten pounds pressure. Simmons was able to dessicate this material and to demonstrate that in this condition it retained its bactericidal property for a period longer than when preserved in aqueous solution.

To a degree, the presence of this substance would explain the remarkable results of maggot therapy against infections caused by hemolytic streptococci, staphylococcus aureus, and *Clostridium Welchii*. Since the use of live maggots is not always feasible, for one or another reason, the isolation of their germicidal principle and its preservation in dessicated form may eventually afford a means of disinfection more dependable than those now employed. A new field has been

opened for the investigation of living organisms as a potential source of useful and hitherto unknown bactericides which may prove to be of inestimable value in the treatment of bacterial suppuration.

Nonspecific Colitis

There is no more specific manner in which to indicate our ignorance concerning the etiology of a disease than to designate it by a generic term preceded by the word "nonspecific", "idiopathic", or "essential". The term "nonspecific colitis" in itself is strongly reminiscent of Axel Munthe's description of colitis, "Nobody knew when it came, nobody knew when it went away".

Nevertheless, a lesion exists wherein an inflammation of the colon cannot be accounted for by the more specific causes for this pathological change. It has occurred to Hare¹ that this type of colitis may be dependent upon an allergic background. An investigation of thirty-eight cases of nonspecific colitis revealed that approximately eighty-five per cent of them gave a definite history of allergy in either themselves or in members of their family. Asthma, hay fever, urticaria, and migraine were some of the allergic conditions complained of in addition to the intestinal disorder. Hare distinguishes this type of colitis from others in that the mucous membrane presents an abnormally granular appearance and bleeds readily when disturbed. Ulceration is not always present.

The outward manifestations of allergic phenomena are well-known but it is highly probable that others exist which as yet are undiscovered. Mucous membrane is a vulnerable point in allergic individuals. In hyperesthetic rhinitis, hay fever, and asthma, changes in the mucosa are observed in the respective areas where these lesions exist. It seems plausible therefore, that the mucous membrane of the intestinal tract may likewise become

¹ Simmons, S. W.: Bactericidal Principle in Excretions of Surgical Maggots Which Destroys Important Etiologic Agents of Pyogenic Infections, *Baltimore Journal of Bacteriology*, 30:253, Sept. 1935.

¹ Hare, D. C.: Allergic Factors in Etiology of Nonspecific Colitis, *Lancet*, 2:767, Oct. 5, 1935.

altered by an agent to which a person is sensitive. Continued investigation into the history of patients suffering from a colitis of undetermined origin together with extensive tests to determine the presence of sensitization will add further to our knowledge of this subject.

CURRENT COMMENT

"IT IS TO BE REMEMBERED that collective effort in getting medical service is a comparatively new thing. It is out of line with what has hitherto been the long tradition of medical practice, namely, doctor and patient dealing with each other alone in a confidential relation that has proved itself, on the whole, of the most enormous value. * * * Disregard of what has been found to be valuable and essential in medical practice: namely the responsibility of the family doctor for the family, has caused the path of progress to be marked by many monuments of failure when mistaken efforts have come to grief. We need results that are best in the end, not the quickest results."—From the address of Mr. Richard M. Bradley, a Trustee of the Thomas Thompson Fund, before the Windham County Health Council, Brattleboro, Vermont, October 19, 1935.

WILLARD C. RAPPLEYE, Dean of the College of Physicians and Surgeons, in his report to Columbia's President, among other things says, "It has frequently been suggested that the United States should adopt one or another of the plans (of sickness insurance) which have been used abroad. * * * It does not follow that a satisfactory solution for the situation in Germany in 1881, for example, is the program which should be applied in the United States in 1935."—(*New York Herald Tribune*, November 26, 1935.)

MEN HOLDING PUBLIC OFFICE, like private individuals, should be judged by their actions and their statements. It is not well to attribute to any man less worthy motives than those that he professes. * * * Thus does Albert Shaw discuss "Utopia by Purchase," in the December 1935 *Review of Reviews*. Comparing our present spending spree with conditions in Bagdad in the time of Haroun Al-Rashid, he says, quoting from an available epitome of the career of this ruler, "No caliph ever gathered around him so great a number of learned men, poets, jurists, grammarians, cadis and scribes, to say nothing of the wits and musicians who enjoyed his patronage." He further quotes a certain reference book which, though admitting the reality of the golden era that

Haroun inaugurated, would have us think that toward the end of his administration he had a bad time with his vizier and other cabinet officials and bureaucrats, and also with his near relatives; and that "his other unreasonable acts caused general disorder and rebellion in his realm." * * * Shaw concludes this comparative comment with, "But we will risk any standing we have among students of monetary statistics when we venture the remark that Haroun's dinars would not have gone very far if matched against the Roosevelt dollars that Harry Hopkins is handing out. We are glad to have the actors, artists, and musicians considered by our dispensers of bounty. The white-collar people are more helpless when out of work than farm hands and the bricklayers. We do not like to see artists and musicians boondoggling at rough jobs on highways or in sewer trenches for which they are not fitted. * * * The worst thing that can be said about federal relief as a social influence has to do with an evident decline of the spirit of self-help. When a family is drawing enough money from relief * * * he sticks to the government relief list, and loses courage, energy and manhood."

"WITHOUT THE WHOLE-HEARTED cooperation of those members of the medical profession who gave their services free, or for the slight payment our relief authorities were able to provide—payments which were hardly more than tokens of appreciation and partial contributions toward the doctor's expenses—many of our citizens could not have survived the depression." From the address of Governor George H. Earle, at the opening-session of the State Medical Society of Pennsylvania.

THE *Detroit Medical News* carries the story that the Detroit Council had approved the motion "that all welfare patients, after one treatment be referred back to a private practitioner, in both government-supported and community chest-aided dispensaries and welfare departments."

"IT REMAINS THEN a fact that as long as the physicians are giving this great amount of service to the County Hospital (about \$50,000) and saving the county tax payers more than a half a million dollars that they should control the medical situation without the interference of any lay boards or organizations that are constantly seeking changes," says Dr. Clyde P. Dyer, Editor, *St. Louis County Medical Bulletin* for November 22, 1935.

ROBERT H. HAYES, SECRETARY of the Chicago Medical Society, writing in its *Bulletin*, commenting on the action of the

Attorney General of New York in his legal attack on the Life Extension Institute, Inc., remarks that the Attorney General charges the Life Extension Institute, Inc., with diagnosing, prescribing and treating diseases of humans, and with having "continuously and habitually practiced medicine," as defined by the educational laws of New York State. * * * "Success and best wishes to the New York Medical Society and Attorney General Bennett for their attack on the non-medical practice of medicine by chain store methods."—Thank you, Dr. Hayes.

"IN THE COURSE of every week, radio listeners are inveigled into hearing 116 broadcasts concerning the therapeutic merits—not merely properties—of an array of obnoxious and dangerous nostrums. The bait consists of the highest class radio talent available, and in consequence must cost a considerable sum. The total amount spent for this publicity would pay for the proper care of that great group of neglected individuals visualized by the Foundations in their plea for compulsory Health Insurance. Apart from the economic extravagance involved, this condition of affairs constitutes a public health menace which we should all recognize. Many of the "Funds" have investments interlocked with those of the nostrum manufacturers and the reason for their inertia in this regard is obvious. The Philadelphia County Medical Society invites its members to participate in its Radio Program. Every five minutes utilized by them may be considered as at least keeping some nostrum off the air."—*The Weekly Roster and Medical Digest of Philadelphia*. Repub-

lished in the *St. Louis County Medical Bulletin*, November 22, 1935.

AMONG THE COURSES listed for Thanksgiving by the *Bulletin* of the Monroe County Medical Society is the fact that "it appears that socialized medicine is not just around the corner, and is evidencing costivity at early flexures" and "there remains the satisfaction of being a member of a social group whose distinction lies in its unselfishness, its ready recognition of its own shortcomings, and its generally high standard of ethics."

"THE ROSENWALD FUND has just appropriated a quarter of a million dollars to further socialization of medicine," thus says a circular letter from the *Debaters Information Bureau* under date of November 22, 1935.

THE *New York Herald-Tribune* of November 26, 1935, carries an editorial on "Harvard and the Nation." After commenting on the scholarship announcements and the refreshing news that the especially gifted students are to be stimulated, the editorial makes a significant quotation from a statement of President Conant, to wit: "During the years to come it is possible that universities which have a maximum degree of independence from governmental support will fulfill a role of special significance in the maintenance of intellectual freedom." If education is to be on guard to protect its intellectual freedom from governmental control, how much more is it to our purpose to maintain medical intellectual freedom and integrity by avoiding either governmental or any lay control over medical freedom.

THE LAWYER'S BARK AND THE DOCTOR'S BITE

Even a worm will turn, and even a browbeaten doctor on the witness stand will sometimes give a neat back-thrust at the lawyer who bullies him too far. A physician who is telling stories in *Radiology* about his experiences in court recalls an amusing tilt he had a few years ago. He is Dr. I. S. Trostler, of Chicago, and he tells us that the attorney in the case was an old acquaintance, a very large man and known to be extremely abusive to opposing witnesses. Our acquaintance, says Dr. Trostler, did not prevent his applying some of his severest abuse to me.

He had asked me some question to which I had replied, "I do not know," at which he pretended to become very much incensed. Roaring loudly at me, he shook his long index finger under my nose, so close that I could feel the wind stirred up by it; he continued in his apparent attempt to embarrass and browbeat me.

Unabashed and not at all afraid, I stood this for quite a while. Then I gently pushed his hand away from in front of my face and quietly but distinctly said, "Mr. O'D. . . . , if you do not take your finger away from under my nose, I will bite it."

My remark and the accompanying action caused all present to shout with laughter and somewhat startled the big, blustering lawyer. After the bailiff had restored order, I said, "On second consideration, Mr. O'D. . . . , I do not believe that I will bite your finger. It is too dirty," which again caused those present to be convulsed with laughter.

I was excused and the court declared a recess. The big lawyer affectionately put his arm across my shoulder and we walked out together. He assured me that he had never been so disconcerted in his life and he told the story as a good joke on himself several times in my presence.

Correspondence

[THE JOURNAL reserves the right to print correspondence to its staff in whole or in part unless marked "private." All communications must carry the writer's full name and address, which will be omitted on publication if desired. Anonymous letters will be disregarded.]

LOUIS H. PINK
Superintendent of Insurance

STATE OF NEW YORK
INSURANCE DEPARTMENT
ALBANY

October 4, 1935

New York State Journal of Medicine,
33 West 42 Street
New York City.

Dear Sirs:

This Department has been and is the recipient of innumerable complaints and inquiries concerning certain unauthorized insurance companies doing or seeking to do business in this State through the medium of advertisements and solicitation either by mail or through direct personal contact.

Most of these companies have been found unreliable and untrustworthy and have been refused licenses to operate in this State. Doing business with any one of them is at assured's own risk. Not one of them is financially responsible in this State as compared with the fact that life, health and casualty corporations, to secure a license to carry on business in this State must have a minimum of \$100,000.00 in securities required by law on deposit with the Superintendent of Insurance "to be held in trust for the benefit and protection of and as security for the policyholders of the corporation." (Insurance Law, Section 71.)

A few of these unauthorized insurers appear at this time to be carrying on a campaign concentrated on the medical pro-

fession and no doubt have in many instances been successful in placing such policies with uninformed persons, the lure held out being in general, the offer of additional benefits under the policy proffered which cannot, it is claimed, be had by insuring in local companies.

Whether or not this be true and granting the doubt, the advantage of any increased benefit or privilege under such policy would be more than overbalanced by the impotency of assured to force settlement in any situation where a dispute might arise, the assured in such case being absolutely without recourse in this State.

This letter is written with the thought that the subject is of sufficient importance and interest to warrant your estimable publication, through an article or editorial, in issuing a warning to members of the profession against taking out policies of any nature underwritten by such illegally operating concerns.

The doctor is in a position likewise to advise for their protection such patients as appear for examination in connection with life or health policies of insurance, that it be ascertained whether the underwriter is authorized to carry on business in this State.

The enclosed form letter sets forth a few of the dangers of such an investment.

Thanking you in advance for your kind cooperation in the premises, I am

Very truly yours,
JOSEPH E. DEUTSCHBEIN,
Law Case Investigator.

THE NATIONAL FORMULARY, SIXTH EDITION

The American Pharmaceutical Association announces that its Council has officially approved December 16, 1935, as the date when the new N.F. VI will be released for sale in all parts of the country, and has also approved June 1, 1936, as the date when the N.F. VI will become official and will supersede the N.F. V.

As previously announced, the N.F. VI will be distributed for the Association by the Mack Printing Company of Easton, Penna.

The new National Formulary represents a complete and thorough revision of N.F. V. Admissions and deletions are based on information obtained in the U.S.P.N.F. Prescription Ingredient Survey. This survey

was made to determine the materials prescribed and the extent of their use throughout the country. The N.F. VI, therefore, supplements the scope of the Pharmacopoeia and supplies additional information on samples, formulas, diagnostic reagents and standards required by the pharmacist in the practice of his profession.

Of the 689 monographs in the N.F. VI, 208 are Drug or Chemical Monographs and 481 are Monographs of Pharmaceutical Preparations. The more important additions have been in the monographs for ampuls, tablets, fluidextracts, syrups, tinctures and ointments.

Society Activities

Committee on Workmen's Compensation

The following correspondence between the Committee, the Compensation Medical Registrar, and Mr James U Norris President of the Hospital Association of New York State is published here as indicating the status of hospital bills in compensation cases

November 14, 1935

Mr Hugh J Murphy, Compensation Medical Registrar
Department of Labor, State of New York
150 Leonard Street
New York City
Dear Mr Murphy

Rule No 10 promulgated by the Industrial Council prohibits the hospital from collecting medical fees We are creditably informed that the hospitals are continuing to collect and retain fees as formerly and this is being done largely upon the interpretation of a communication addressed by you to Mr James U Norris President of the Hospital Association of New York State, on August 26, 1935

If you will address a second communication to Mr Norris as President of the Hospital Association of New York State, advising him of Rule No 10 and giving him specific instructions to so communicate to all of the institutions of the Association it will go far toward clearing up this matter

If we may have a copy of this second communication we shall see that it is properly circulated to the institutions concerned in the care of injured workmen

Very cordially yours
COMMITTEE ON WORKMEN'S
COMPENSATION

Charles Gordon Heyd, M D
Chairman

David J Kaliski, M D
Frederic E Elliott M D

November 19, 1935

Dr David J Kaliski
Committee on Workmen's Compensation
Medical Society of the State of New York
2 East 103rd Street,
New York City
Dear Doctor Kaliski

In compliance with your communication of the 14th inst, I am enclosing herewith copy of communication sent to Mr James U Norris President of the Hospital Association of New

York State with reference to the manner in which hospital bills should be submitted

Yours very truly

COMPENSATION MEDICAL REGIS-
TRATION UNIT

(Signed) Hugh J Murphy
Compensation Medical Registrar

November 19 1935

Mr James U Norris President
Hospital Association of New York State
141 West 109th Street
New York City
Dear Mr Norris

It has come to my attention that various hospitals are submitting bills to employers and insurance carriers which contain charges for medical and surgical care which of course, is not in accordance with the letter of the law

I was wondering as to whether or not an incorrect interpretation was arrived at by some of these hospitals in my letter to you dated August 26 1935 which you circularized among the hospitals

It is therefore suggested that you again circularize all the institutions of your association advising them as follows

There is no need or necessity for any rules or regulations to be promulgated by the Industrial Commissioner prohibiting hospitals submitting bills which include medical and surgical care as this is very clearly pointed out in Section 13 F, subdivision 1 of the new Medical Practice Act as follows

Hospitals shall not be entitled to receive the remunerations paid to physicians on their staff for medical and surgical services"

It is therefore suggested that you issue instructions to all hospital members of your association that any bills submitted by them should contain charges for general hospital services only

Yours very truly

COMPENSATION MEDICAL REGISTRATION UNIT
Hugh J Murphy
Compensation Medical Registrar

Physicians are invited to refer to the Workmen's Compensation Committee of the Medical Society of the State of New York 2 East 103rd Street, any instances of violation of either the spirit or letter of the above regulation

Medical News

New York County

DR. MAX EINHORN was the guest of honor November 19 at a dinner at the Hotel Astor to celebrate the fiftieth anniversary of his connection with the Lenox Hill Hospital. Dr. Einhorn, who will be 74 in January, recently donated to the hospital the site for a clinic for the study and treatment of cases in the gastroenterological field. About 200 physicians attended the dinner, which was given by the board of trustees, the medical board and the Alumni Association of the Lenox Hill Hospital.

FRIENDS OF Dr. Nathan Ratnoff, medical director of Beth Israel Hospital and Jewish Maternity Hospital, announced at the Waldorf-Astoria at a dinner in honor of his 60th birthday on November 12 that a \$315,000 fund had been raised for assistance of charitable projects which Dr. Ratnoff aided for years.

It was said that the greater portion of the fund would go to Hebrew University in Palestine for use in establishment of a medical department, and to the loan and relief committee of the Medical Society of the County of New York, which controls a fund for relief of physicians in distress.

Sponsors of the dinner, attended by 830 guests, had considered a birthday present to Dr. Ratnoff, but he declined to accept a gift, suggesting that if his friends wished to honor him he would be pleased if they would aid the various works which he had supported.

A WORK WORTH CONTINUING

A timely opportunity to tell what the statewide relief nursing service has done is afforded by its transfer from the State TERA to the WPA. This does not mean any change in organization or conduct. It will continue under the supervision of the State Department of Health. We are told that since its inauguration as a work relief project, the statewide bedside nursing service has provided care to more than 550,000 families, with considerably in excess of a million and a quarter home visits. Of these visits, 568,000 have been for the specific purpose of giving bedside care to the needy sick. The remaining visits were for health instruction and care of special groups; 300,000 to infants and preschool children; 175,000 to school children; 60,000 prenatal and 70,000 postpartum visits; assistance with 3000 confinements in the home and more than 100,000 visits in the interests of controlling tuberculosis, venereal and other communicable diseases.

THE LONG AND BITTER feud between Dr. Menas S. Gregory, former head of the psychiatric division of the Department of Hospitals, and Dr. S. S. Goldwater, Commissioner of Hospitals, has been brought to an end by the withdrawal of a \$250,000 libel suit brought by Dr. Gregory in June, 1934, and his return, as consultant psychiatrist of the psychiatric division of Bellevue Hospital, to the institution which he served for more than thirty years until his resignation eighteen months ago.

The differences between the two men, the subject of acrimonious disputes ever since Dr. Gregory was accused of having shown favors to "wealthy and politically powerful patients" by the Commissioner of Hospitals, were reported to have been settled amicably.

The post of director of the division, from which Dr. Gregory resigned, is still unfilled. Friends of the two men were given credit for having cleared up the misunderstanding which led to the dispute. On November 8, Dr. Gregory had applied to the Supreme Court for permission to ask Dr. Goldwater to specify the persons to whom he was alleged to have shown favoritism while he was at Bellevue Hospital.

The announcement of the understanding was issued by Charles B. Brophy, of 15 Broad Street, counsel for Dr. Goldwater, and by Louis J. Vorhaus, of House, Grossman & Vorhaus, 521 Fifth Avenue, counsel for Dr. Gregory.

In addition these nurses have assisted in 32,488 clinics with an aggregate attendance of 984,271 persons, special emphasis having been given to diphtheria immunization of preschool children, child hygiene and prenatal care. Special nursing for those acutely ill in their homes has been provided for more than 2000 patients.

The marked appreciation of this supplementary service in communities in which it has been rendered demonstrates strikingly the widespread urgent need for additional service which, prior to the inauguration of the relief nursing project, it had been impossible to provide. Every agency equipped and qualified to supervise the work of these nurses has been utilized fully with excellent results. A major objective of this program is to aid in bringing about the establishment of permanent nursing facilities, especially in areas suffering from severe economic distress which will meet more adequately the local needs.

Medical News

Bronx County

THE SOCIAL SEASON of the Bronx County Medical Society is advertised to open "with a BANG," with "delicious food," "heavenly dance music," and "unique and unexcelled entertainment" for "members, their ladies, and friends," on Tuesday, Dec 17, at the Cotton Club, 142d St and Lenox Ave. The proceeds are to go to the relief fund.

THAT THE COST of medical care is felt even by the medical profession is evidenced in the inaugural address of Dr Milton J. Goodfriend, President of the Bronx County Medical Society. "Sickness," he said, "has always been the cause of much distress and financial hardship with a physician and his family. Insurance at present is high and inadequate. We have made preliminary studies and we feel that it is possible to obtain a group insurance plan at low cost to properly protect our members. A committee has been appointed and would like to have your reaction."

A NOTABLE special meeting of the Bronx County Medical Society was held on Nov 25 at Elsmere Hall. The members listened to notable addresses by three distinguished guests: Dr Frederic C. Sondern, President of the New York State Medical Society, Dr James S. McLester, President of the American Medical Association, and Dr J. Fate Mason, President-elect of the American Medical Association.

Cortland County

"VITAMIN B may spell the doom of pink elephants," is the colorful phrase used by a local paper in reporting the address of Dr Peter G. Denker of New York City before the Cortland County Medical Society at the Cortland County Hospital on Nov 15. Lack of Vitamin B, the speaker said, rather than the effects of alcohol, has been found in experiments to cause delirium tremens. Persons drinking heavily, he said, as a rule do not receive sufficient nourishment and fail to get enough of vitamin B in their systems. Experiments show that supplying this vitamin has prevented cases of delirium tremens. Discussion of this subject came up in the course of the doctor's lecture on "Diseases of the Spinal Cord and Peripheral Nerves."

Delaware County

"CAN RIPLEY beat this?" asks the *Downton News*. "Dr O. Q. Flint of Delhi called on Dr Brittain Tuesday afternoon. He made a report on Winfield Lacey, whom

Dr Brittain sent to the Welfare Hospital at Delhi on Thursday, Oct 31, for an operation for intestinal obstruction. Dr. Latcher of Oneonta operated and found an obstruction, the cause of which, after close examination, proved to be a porcupine quill about three fourths of an inch in length. It is presumed that this had entered the body somewhere and finally lodged in the intestines. The patient is doing well."

Erie County

THE "MERCY DEATH" plea of a Buffalo woman, played up sensationally by the daily press is now regarded as a hoax or a stunt inspired by a more or less energetic newspaper reporter. Her plea for death was supposedly addressed to the Erie County Medical Society, but the secretary says that no such communication has been received. She was injured in an automobile accident more than two years ago and members of her family are quoted as saying that her injuries were slight and that she has now practically recovered. Her physician is reported as attributing her statement to "overwrought nerves caused by pain and brooding." Meantime acres of newsprint have been defaced by interviews with almost everyone willing to talk on the good old topic of euthanasia.

IT WAS VOTED unanimously at the meeting of the Erie County Medical Society on Nov 18 to name a committee to study the desirability of having a publicity representative to handle news matters and correct mistaken reports about the profession.

At the same meeting candidates for offices were nominated as follows: President, Dr Milton Potter and Dr John L. Eckel, first vice president Dr John T. Donovan, second vice president Dr Thurber Le Win and Dr Harry C. Guess, secretary, Dr Louise W. Beams, treasurer, Dr Caryl A. Koch, board of censors, Health Commissioner Francis E. Fronczak, Dr Charles W. Bethune, Dr Abraham Weil, Dr F. J. Rutlak and Dr M. A. Sullivan.

For the chairmanship of the committee on public health, Dr Joseph O'Gorman, chairman of economics, Dr John Hoffman and chairman of the committee on membership, Dr C. A. Bentz. For the post of delegate, eight to be selected, Dr Bauckus, Dr Mary Kazmierczak, Dr O'Gorman, Dr Charles Leone, Dr Marshall Clinton, Dr Albert Gartner, Dr Matthew Carden, Dr Harvey P. Hoffman and Dr John S. Grun-Franceschi. Chairman of Legislation, Dr James L. Gillighey.

Fulton County

DR. LLOYD ZIEGLER of Albany was the principal speaker at the meeting of the Medical Society of Fulton County on Nov. 20 in Gloversville. He read a paper on "Practical Psychopathology."

Kings County

THE FOLLOWING new officers were nominated on Nov. 19 by the Kings County Medical Society at its monthly meeting in MacNaughton Auditorium, 1313 Bedford Ave.: Dr. Henry Jochim, president; Dr. Thomas A. McGolderick, president-elect; Dr. John B. D'Albora, vice president; Dr. Joseph Rafael, secretary; Dr. Thomas B. Wood, associate secretary; Dr. Augustus Harris, treasurer; Dr. John McCabe, associate treasurer; Dr. Jacques C. Rushmore, librarian, and Dr. Edwin P. Maynard, Jr., associate librarian.

The Alumni Association of St. Catherine's Hospital presented a portrait of Dr. Frank Dormer Jennings to the society. The portrait was accepted by Dr. Edwin P. Maynard, Jr., the curator.

Dr. Walter Bauer, assistant professor of medicine at Harvard, gave an illustrated lecture on arthritis. At the business meeting following Dr. Bauer's paper, the society went on record as favoring medical supervision of industrial laboratories.

Monroe County

WARNING HAS BEEN received by the Medical Society of Monroe County of three so-called "human test tubes" who may attempt to dupe the Rochester public with a fake exhibit, posing as under sponsorship of the Mayo Clinic, Rockefeller Foundation and American Medical Association. The group allege they are demonstrating experiments in diet, sleep and locomotion and appear exclusively on roller-skates. The report says that although they put on a good roller-skating show, their connection with the medical clinics has been denied and likewise the validity of their scientific "experiments."

Queens County

DR. THOMAS CLARK CHALMERS, of Forest Hills, died on November 16 at Exeter, N. H. He was 67.

Dr. Chalmers was active in organized medicine and for many years was a delegate of the New York State Medical Society to the conventions of the American Medical Association. Many times in conventions he sponsored resolutions calling for modification of the Volstead act. He was in part responsible for the modifica-

tion which permitted physicians to give alcohol to patients.

From 1921 to 1922 he was president of the Queens County Medical Society and chairman of the board from 1924 to 1931. He was chairman of the building committee for the organization's new building at Forest Hills. He was a member of the New York Academy of Medicine and president of the Medical Association of Greater New York in 1927. Dr. Chalmers was also president of the Society of Medical Jurisprudence from 1924 to 1926.

AT A RECENT MEETING of the Queens County Medical Society in the Medical Building, Forest Hills, Dr. James R. Reuling of Bayside was nominated as president-elect.

Dr. Reuling will become president-elect on Jan. 1, succeeding Dr. James Dobbins of Long Island City. Dr. Dobbins will automatically succeed Dr. Morris S. Bender of Jamaica as president Jan. 1.

Others named were Dr. Guernsey Frey of Forest Hills, secretary, and Dr. William Barry of Long Island City, treasurer.

St. Lawrence County

DR. F. F. WILLIAMS was elected president of the St. Lawrence County Medical Society at the annual meeting and dinner on November 21 at Ogdensburg.

Dr. Williams, who has been practicing at Canton for half a century, succeeds Dr. John E. Free of the Hepburn Hospital surgical staff, who has held the office during the past year.

For vice-president the society chose Dr. W. H. Mulholland of Heuvelton. Dr. S. W. Close of Gouverneur was reelected secretary. He has held that office for 48 years. Dr. L. T. McNulty of Norwood was reelected treasurer.

Dr. R. J. Reynolds of Potsdam was chosen delegate to the House of Delegates of the New York State Medical Society, with Dr. S. W. Sayer of Gouverneur as alternate. Drs. C. E. Elkins of Massena and M. J. Stearns and Paul G. Taddiken of Ogdensburg were reelected to the board of censors. A scientific program was presented, the feature of which was an address by Dr. Free on "Surgery in Pulmonary Tuberculosis." Dr. D. M. Brumfield of Saranac Lake read a paper on "Silicosis" and Dr. Homer L. Sampson of Saranac Lake presented a paper on "X-ray Findings in Silicosis." Dr. J. R. Patton, medical director of St. John's Tuberculosis Hospital and S. E. Simpson, superintendent of the Jefferson County Sanitarium, also spoke.

Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

An Interesting Foreign Body Case

An interesting case* in which a surgeon was exonerated from charges of malpractice came before the Courts of one of the Pacific States recently. The subject matter of the litigation was the leaving of a sponge in the abdominal cavity during an operation. The facts must be set forth at some length to appreciate the ruling in the case.

A woman, forty three years of age, consulted a general practitioner with respect to varied complaints. He called into consultation Dr. D. and the two doctors diagnosed the condition as a pelvic infection requiring operation. Dr. D. therefore, performed an operation upon her with the assistance of the other doctor, and several nurses. Upon opening the abdomen the pelvic organs and the intestines were found grown together in a mass. Both Fallopian tubes were abscessed. The right ovary and tube was a mass of abscesses which according to the surgeon held about a quart of pus, and filled the whole pelvis. The uterus contained numerous fibroid tumors. In the course of dissecting those tumors and the intestines from the broad ligament, the abscess ruptured. In order to clean up the great amount of pus, approximately eight dozen sponges were used of various types. The operation was necessarily a very long and difficult one, taking over two hours in all. Finally the diseased organs were all removed, and the pus had been sponged out, and the sponges removed, and the surgeon started to close the abdomen. At this point one of the nurses suggested that she believed one of the sponges was missing.

What followed from that point on was described by the surgeon as follows:

We always make a mental note when they put a big sponge in, or two big sponges, or three big sponges. I always keep them in my mind and when they are taken out and we were all three confident there was not a sponge left in the abdomen or we did not put any sponges in there. We counted out all the sponges we had put in and were all confident this sponge had not been used, but notwithstanding I opened the wound again and put my hand into the abdomen and felt around and made a hurried examination but did not find any sponge could not feel any sponge or anything abnormal and made the remark that we would have to hurry

up and get this patient off the table and resuscitate her, and so I went on and closed the wound, excepting that we put in drainage.

Well, on account of the condition of the patient, and the length of time that she had been undergoing this operation, the amount of work there was connected with the operation, the patient had been getting in a bad shape, and it was time that she was taken off, the anaesthetic stopped and resuscitation begun.

Q After she had been on the table two hours, and subjected to this heavy operation what was your best judgment whether there could be a sponge there or not, as to whether or not you ought to carry the operation further with regard

A Well it was absolutely essential that we should not carry on any further if there had been a sponge left in there if I had known there was a sponge left in there, I would have left the sponge at that time, if I could not have found it conveniently, I would have left the sponge there temporarily and removed the sponge later.

Q Even if you had known it was there?

A Even if I had known there was a sponge in there. She had undergone a heavy operation when you remove one ovary and both Fallopian Tubes, a large abscess and the womb complete in a case like that and being a couple of hours under the anaesthetic, it is time to get that patient out of there and this patient especially. She was in bad shape. She had stood just about all that she could stand, and it was time to take her out, and it is up to me. It is my business to say whether I shall stop this operation this minute or carry it on one half hour longer or ten minutes longer, and I acted on what I thought was my best judgment in her case, and my judgment told me to stop that operation right then and close up the wound and stop the anaesthetic and put her to bed and resuscitate her.

Undoubtedly a sponge was left in the body of the patient during that operation for about five weeks later the same surgeon made another incision into the patient's abdomen and removed a sponge.

The patient instituted a malpractice action against Dr. D. charging him with negligence in permitting the sponge to remain in her body and claiming that such negligence was the cause of the second operation and the cause of ill health. The defendant conceded that the sponge had been left in after the first operation, but asserted that under the circumstances he had been guilty of no neglect and that the sponge had caused the

*Rayburn v. Day, 268 P. 1002

patient no harm, but that the later operation had become necessary due to the formation of a secondary abscess, an aftermath of the severe pelvic infection.

Upon the trial the defendant's story was substantially as above, and he was corroborated by the nurses and by his assistant. *The plaintiff undertook to establish negligence from the conceded failure to remove the sponge and by testimony concerning conversations with the doctor after the operation, relied upon as admissions of negligence.* There was testimony that established that the sponge would be a means for the propagation of pus.

At the conclusion of the evidence the Court sent the case to the jury and instructed them as to the defendant's liability in part as follows:

I instruct you that the defendant is not liable for a mere error of judgment, if such judgment is based upon the exercise of reasonable care and skill; and in this connection I instruct you that if you find from the evidence that the attention of the defendant, Dr. D. was called to the possibility of the one sponge being short or missing, and if in the exercise of his judgment, he ceased to explore the body of the patient for the sponge, after making such examination as he deemed prudent, if he made such examination, and if you find that the defendant in good faith decided to make no further exploration and search at that time for the reason that he considered such search might endanger the life of the patient, then he had a right to act upon his own judgment, and no negligence could be inferred therefrom, provided he exercised reasonable care and skill. . . . If you find that the defendant exercised his judgment based upon the exercise of reasonable care and skill, if he did, in the matter of his examination of the patient's body to ascertain if all sponges were accounted for, then he was not guilty of negligence, and plaintiff could not recover, but, if he failed to exercise reasonable care and skill, then I instruct you that the defendant would be liable and your verdict should be for the defendant.

The jury returned a verdict in favor of the defendant, and an appeal was taken to the highest State Court by the plaintiff.

The plaintiff as one of the principal grounds for the appeal urged that the Court had improperly charged the jury upon the trial. The plaintiff claimed to have been entitled to certain alternative instructions, which her counsel upon the trial had requested. Those requests to charge, which had been denied included the following:

You are hereby charged that the use of sponges constituted a part of the operation, just as much as the opening of the body with the knife, that the operation begins with the beginning of the opening in the body, and ends when the opening has been closed, and that the use of the sponge during the course of the

operation constituted a part of the operation, and that the proper removal of the sponges from the body was a part of the operation. The removal of the sponge was a part of the operation, and, if the defendant failed to remove the sponge, he left the operation uncompleted so long as the sponge remained within the body of the plaintiff.

The Appellate Court, however, refused to disturb the instructions given to the jury by the trial Court, determining that they were fair and proper, and affirmed the verdict and judgment in favor of the doctor. In so ruling the Court made the following remarks in its opinion:

A failure to remove a sponge would not in all instances constitute a breach of the surgeon's duty to use due care; if such was its essential effect, there was no need to take testimony in this case, because the defendant admitted that he left the sponge in the incision. Yet the concluding portions of each proposed instruction, if given, might have created in the mind of the juror the conception that the defendant owed an absolute duty to remove all sponges, that a sponge left in the incision constituted a breach of that duty. . . . We believe that the Court did not prejudice the plaintiff's rights when it failed to give the foregoing requested instructions.

Death From Removal of Tonsils and Adenoids

A man brought his three year old son to a doctor specializing in ear, nose and throat work and explained to the doctor that the boy was having trouble with his breathing and probably needed an operation.

The doctor examined the boy and found that he was suffering from hypertrophied tonsils and adenoids and suggested their removal.

A few days later the boy was brought to a hospital and an operation was performed upon him, under general anesthesia, and the tonsils were removed by dissection and snare and the bleeding was controlled by ligation and the use of a hemostat. After this the adenoids were removed by means of an adenoid curette and the bleeding following this was controlled by pressure with gauze sponges. All bleeding was stopped before the child was put to bed in the hospital.

The following morning the doctor examined the boy's throat and found it clean and found the child in excellent condition, so he permitted the child's parents to take him home. He never saw the patient again.

The doctor subsequently learned that within a few weeks after the operation the child had died from some sort of lung trouble.

An action was brought against the doctor

by an administrator who was appointed for the child, to recover damages claimed to have been sustained by reason of the boy's death which it was claimed resulted from the negligence of the defendant doctor. The claim was made that the operation itself was negligently performed, and that subsequent thereto the defendant failed to give the child necessary and proper postoperative treatment and that as a result he developed postoperative septicemia and died.

Across the Desk

Gaskets vs. Caskets

IT APPEARS FROM recent investigations that a serious or even fatal automobile accident may be caused by only two parts of carbon monoxide from a motor exhaust in ten thousand parts of air, if breathed for $2\frac{1}{2}$ to 4 hours. Motorists of course have been warned for years about this deadly gas, but few have realized how little it takes to dull the driver's responses, dizzy his brain, and flaw his judgment. Four parts in ten thousand cause collapse and eight are fatal. A little leak in a gasket may let out enough to poison the air in the car and do the trick, and a clever writer suggests that "a new gasket is cheaper than a casket."

But isn't there another danger, one that no amount of new gaskets can help? Our city streets are like trenches, walled-deep with brick and stone, into which hundreds of thousands of motors discharge torrents of exhaust gases all day and every day. Might not the mixture at times amount to two parts in ten thousand, and be sufficient to account for some of the crashes? Carbon monoxide is only slightly lighter than air, four per cent lighter, to be exact, and in the busy part of the day the air in the streets must be more than a little tainted. And what is more, carbon monoxide does its fatal work by displacing the oxygen in the red corpuscles of the blood, and is cumulative in its effect, so that its action is insidious and creeps upon us before we know it. The driver threading his way through crowded traffic is surrounded by motor exhaust pipes pouring out streams of carbon monoxide to right, to left, before and behind. Is it credible to suppose that it has no effect? Something more is needed than a new gasket.

It would be easy to carry this farther, and ask if our twenty million automobiles have not affected all of us more or less with their carbon monoxide infiltration. One effect of the gas is said to be "impaired

When the case was reached for trial in its regular order the case was marked from the calendar by reason of the failure of the plaintiff's attorney to proceed with the case at that time.

Some time later a motion was made dismissing the case for failure on the part of the plaintiff to prosecute the action and at that time the plaintiff stipulated to discontinue the action.

judgment." We certainly have seen plenty of that around in recent years. Some have gone so far as to say that everybody seems to be going crazy. Queer actions unquestionably have been going on, even in Washington, but we must not blame them all on the old car. That would be a little cracked, too.

One thing, at least, could be done that would be in the right direction, anyway. Practically every other kind of exhaust pipe, on our locomotives, steamships, motorships, and factories, discharges upward, away from everyone, while the automobile discharges its exhaust almost in the face of people in the street. It would be simplicity itself to lead the pipe inconspicuously to a high point at the rear and send the gases upward. Then the CO, a little lighter than air, aided by its heat and the push of the exhaust, would rise to harmless levels. Some trucks already have arrangements of this kind which look home-made, perhaps installed to protect the men while loading and unloading, but at any rate it shows what native common sense can do when applied to the problem.

Kidding Captain Kidd

UNSCRUPULOUS DRUG DEALERS are now outdoing themselves. They make Captain Kidd seem like an amateur and will be able to kid him unmercifully if they meet him in some future life sailing the lakes of molten brimstone. They are "more active than ever before," according to no less an authority than the Chief of the Food and Drug Administration at Washington. Their latest game is to buy up old and deteriorated products in "salvage" sales and "distressed merchandise" transactions and work them off on the public. Seizures have brought the discovery of goods that have actually been on the shelves since before the Food and Drug Law was enacted. In Texas alone the State and Federal officers seized and destroyed 28 tons of these dangerous old

patient no harm, but that the later operation had become necessary due to the formation of a secondary abscess, an aftermath of the severe pelvic infection.

Upon the trial the defendant's story was substantially as above, and he was corroborated by the nurses and by his assistant. The plaintiff undertook to establish negligence from the conceded failure to remove the sponge and by testimony concerning conversations with the doctor after the operation, relied upon as admissions of negligence. There was testimony that established that the sponge would be a means for the propagation of pus.

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Gaskets vs. Caskets

IT APPEARS FROM recent investigations that a serious or even fatal automobile accident may be caused by only two parts of carbon monoxide from a motor exhaust in ten thousand parts of air, if breathed for $2\frac{1}{2}$ to 4 hours. Motorists of course have been warned for years about this deadly gas, but few have realized how little it takes to dull the driver's responses, dizzy his brain, and flaw his judgment. Four parts in ten thousand cause collapse and eight are fatal. A little leak in a gasket may let out enough to poison the air in the car and do the trick, and a clever writer suggests that "a new gasket is cheaper than a casket."

But isn't there another danger, one that no amount of new gaskets can help? Our city streets are like trenches, walled-deep with brick and stone, into which hundreds of thousands of motors discharge torrents of exhaust gases all day and every day. Might not the mixture at times amount to two parts in ten thousand, and be sufficient to account for some of the crashes? Carbon monoxide is only slightly lighter than air, four per cent lighter, to be exact, and in the busy part of the day the air in the streets must be more than a little tainted. And what is more, carbon monoxide does its fatal work by displacing the oxygen in the red corpuscles of the blood, and is cumulative in its effect, so that its action is insidious and creeps upon us before we know it. The driver threading his way through crowded traffic is surrounded by motor exhaust pipes pouring out streams of carbon monoxide to right, to left, before and behind. Is it credible to suppose that it has no effect? Something more is needed than a new gasket.

It would be easy to carry this farther, and ask if our twenty million automobiles have not affected all of us more or less with their carbon monoxide infiltration. One effect of the gas is said to be "impaired

When the case was reached for trial in its regular order the case was marked from the calendar by reason of the failure of the plaintiff's attorney to proceed with the case at that time.

Some time later a motion was made dismissing the case for failure on the part of the plaintiff to prosecute the action and at that time the plaintiff stipulated to discontinue the action.

judgment." We certainly have seen plenty of that around in recent years. Some have gone so far as to say that everybody seems to be going crazy. Queer actions unquestionably have been going on, even in Washington, but we must not blame them all on the old car. That would be a little cracked, too.

One thing, at least, could be done that would be in the right direction, anyway. Practically every other kind of exhaust pipe, on our locomotives, steamships, motorships, and factories, discharges upward, away from everyone, while the automobile discharges its exhaust almost in the face of people in the street. It would be simplicity itself to lead the pipe inconspicuously to a high point at the rear and send the gases upward. Then the CO, a little lighter than air, aided by its heat and the push of the exhaust, would rise to harmless levels. Some trucks already have arrangements of this kind which look home-made, perhaps installed to protect the men while loading and unloading, but at any rate it shows what native common sense can do when applied to the problem.

Kidding Captain Kidd

UNSCRUPULOUS DRUG DEALERS are now outdoing themselves. They make Captain Kidd seem like an amateur and will be able to kid him unmercifully if they meet him in some future life sailing the lakes of molten brimstone. They are "more active than ever before," according to no less an authority than the Chief of the Food and Drug Administration at Washington. Their latest game is to buy up old and deteriorated products in "salvage" sales and "distressed merchandise" transactions and work them off on the public. Seizures have brought the discovery of goods that have actually been on the shelves since before the Food and Drug Law was enacted. In Texas alone the State and Federal officers seized and destroyed 28 tons of these dangerous old

stocks. In one drug store in Dallas the officers seized 13 antiquated medicinals obtained through foreclosure, bankruptcy, auction or other distress sales, claiming to benefit stomach troubles, women's disorders, rheumatism, eczema, boils, whooping cough, croup, ringworm, catarrh, hay fever, ulcerated sore throat, dandruff, tonsilitis, pyorrhea, piles, bone abscess, kidney and bladder troubles, quinsy, bronchitis, consumption, dropsy, blood diseases, tumors, cancer, nervous ailments, or what-have-you. The proprietor was fined \$400. He was modest, however, compared with a suave druggist in Butler, Ind., who was found selling a "salt" for 53 diseases, including ulcers, cancer, Bright's disease, tuberculosis, scarlet fever and diphtheria. This agile character pleaded guilty unexpectedly and slipped by with a fine of \$1. We ought to hear more of him.

This shows in a brief and vivid flash what the honest and conscientious druggist is up against in the way of piratical and cut-throat competition. It gives the reason why the doctor should throw his influence to the man who keeps character and honor behind his prescriptions. The chemist is passing through a crisis that tests every moral fiber, and it is to the interest of sound medicine to help him maintain the best and highest standards. Some of the leading pharmacists of New York City, united in the Retail Druggists Association, are now working on a Code of Professional Practices. They have appointed a committee to work with the medical profession "toward educating the lay public to the value of the independently owned drug store and the individual practicing physician." Their first step will be "to revitalize their prescription departments" and cooperate more closely with the physician. If the doctors and druggists can unite to help the federal and state officers rout out the scalawags and blacklegs who are preying murderously on the sick and ignorant poor, they will deserve well of the republic.

Surveys—Suspicious and Auspicious

SUSPICIONS ARE BEING expressed in various quarters that the medical survey now on in 19 states will be used to help the drive for state medicine in the coming session of Congress. "It is understood," says the *A.M.A. Journal*, "that the stimulus for this survey came from the Secretary of Labor, and that it meets with Administration approval." There can hardly be any doubt that it will reveal many thousands of sick people who are not receiving medical care. This survey, however, may well be welcomed by the medical profession. In

fact, the Medical Association of Georgia called for such a survey in its own state at two annual meetings and is now working hand in hand with the state and federal health authorities in making the canvass. Once the survey is completed, its findings can be used just as well by organized medicine to further some good plan as by the visionary socializers to boost a bad one. Dr. Paullin, President of the Georgia state body, says that the survey "should accumulate data which will be of inestimable value to the Medical Association of Georgia in helping to perform its needed function of rendering adequate medical care to all of the people." The President of the Wisconsin State Medical Society, too, believes that if the survey is made and reported thoroughly and impartially, "much valuable information which has hitherto been lacking may be secured, and this information may help a great deal in the solution of many of our medical-economic problems." Some program like the Detroit Plan or the Atlanta Plan that is acceptable to the medical profession, could be advanced to meet the situation as revealed.

Not Too Many Doctors

THE IDEA that there are too many doctors is pretty likely to be shattered with the finding that large numbers of sick people are without medical care and that large areas are without proper preventive measures against such diseases as smallpox, diphtheria and typhoid. There are not too many doctors, but too few. The trouble, as the President of the Kentucky State Medical Association points out, is that they are not properly distributed. His state made a survey a few years ago which found that the cities are gradually acquiring a surplus while the smaller towns and rural communities are suffering a constantly increasing scarcity. Young doctors coming from the medical schools cannot afford to go into the rural regions where incomes are problematical. If some method could be found to adjust the maldistribution it ought to provide a living for every doctor now on relief or in distress, and mitigate the evils and abuses of free clinics and the charity list. The immunization needs of the country, alone, would give work to our total imaginary "surplus" of physicians.

Just a glimpse of what could be done can be had by turning the eye to Michigan, where the State Medical Society has joined forces with the State Hospital Association and the Probate Judges Association to give medical care to crippled and afflicted children. The action was precipitated by a crisis in the financial affairs of the Crippled Chil-

dren's Commission, but it was an ill wind which blew much good, we are told, for out of chaos came order, and the physician took his proper place in medical planning for the state. Now the county medical society will cooperate with local probate judges and hospitals in medical care for crippled children and the doctor will have due recognition and compensation. The time seems to be at hand all along the line for organized medicine to make a stand for recognition in all matters pertaining to the care of the sick.

One of the first lessons of military

strategy is that it is not enough merely to beat the enemy. He must be pursued, broken up, cut to pieces, beyond all chance of a reorganization and a new attack. The medical forces fought off the foe with great gallantry last winter and spring. That was only a starter, just enough to warm up. Now a new battle is in prospect, based on the national health survey. This time the tactics should be not only to halt the socializers and visionaries, but to capture their trenches, machine guns and artillery and make any counter attack impossible.

Books

REVIEWED

A Textbook of Surgery For Students and Physicians. By W. Wayne Babcock, M.D. Second edition, revised. Quarto of 1312 pages illustrated. Philadelphia, W. B. Saunders Co., 1934. Cloth, \$10.00.

This is the very welcome second edition of a surgical textbook the first edition of which, published in 1928, has proven to be an excellent text for students and practitioners. The general plan of the earlier edition has been followed.

The great advances which surgery has been making since 1928 has made it necessary to revise and rewrite practically all of the chapters. New sections have been added on the parathyroid glands, the sympathetic nervous system, the duodenum, the mesentery and omentum, the epiphyses and the malacias of bone. New illustrations have been uniformly excellent.

This second edition brings the subject matter well up to date. As in the earlier edition, the presentation is very clear and concise. The surgical field has been thoroughly covered with proper emphasis upon the points of greater importance.

The author is to be congratulated for his excellent accomplishment which is worthy of unqualified recommendation.

EDWARD P. DUNN

The Brain as an Organ. Its Postmortem Study and Interpretation. By Frederic Wertham, M.D. & Florence Wertham. Octavo of 538 pages illustrated. New York, The Macmillan Company, 1934. Cloth \$7.50.

In the face of the several monographs and textbooks of neurology and neurohistology which have appeared in this country during the past year, the publication of another work is itself a mark of courage. It needs but superficial inspection to convince one that the present book packs not only courage, but a punch in its origin.

It is so far removed from the unnecessary stodginess of treatises in this field that one values the purely technical chapters all the more.

The unconventional character which distinguishes this book on the pathological study of the brain is due to the fact that it attempts to transmit ideas rather than interminable and tedious techniques. The modernism of the Werthams is the point of view which calls for a dynamic approach to brain problems instead of fixating them in the hardening fluid of 19th century descriptiveness.

The fruitful sections of the book are the chapters on the individual histological syndromes, on comparative histopathology, the critique of the problem of dementia precox and the chapter on forensic neurohistology. The section on general paresis develops the Wertham's thesis that most so called well defined histological syndromes are not really so. They base their conclusions on their findings that similar pictures are developed in animal encephalitis, etc. This section admirably presents the notion of heterogeneity in neurology, but the choice of general paresis is unfortunate since the authors fail sufficiently to take the mental side of the picture into account. The psychiatry of the parietic is one of the oldest and best founded pictures in all of medical history. The histological picture is practically as characteristic as the psychiatric one. The practical ends are not greatly assisted by dragging in the spontaneous encephalitis of chickens, which can hardly ever demonstrate the parietic psychiatric picture for us, regardless of the duplication of brain lesions.

The chapter on dementia precox should be helpful in laying the ghost of the "organic" in this turbulent field. The use of the concept 'organic' as applied to

schizophrenia need not postulate demonstrable cell changes in the brain. Allergy is an organic concept not less than bone, but no one calls upon the allergists to produce the histological pictures. The constitutional evidences of disease should be sufficient unto the term. The Wertham's exposition of histological failure in this direction is worth every psychiatrist's and neurologist's careful study.

The chapter on forensic neurohistology is little more than a fillip. The physical properties of the book frame the contents excellently, but we could wish that the authors would, in their next edition, expunge most of their unsupported assertions in the purely technical sections or display the evidence. It seems to be essentially a fault of their style of writing, which is otherwise exemplary.

SAM PARKER

X-Ray Interpretation. By H. Cecil H. Bull, M.D. Octavo of 382 pages, illustrated. New York, Oxford University Press, 1935. Cloth, \$7.00.

There are many books and monographs written on the subject of Radiology, many stress a special branch thereof, but this book is rather all comprehensive in 370 pages and therefore is of general use to the clinician rather than outstanding in original thought or depth of knowledge on any particular branch of the subject. It is written in easy, simple style and directs the practitioner in logical sequence upon the radiographic appearance in health and disease.

Its great value is the prominence given the normal, since without it, as the author states in his preface, "no accurate conception of the pathological is possible."

Line drawings and silhouettes are employed to illustrate, but unusual as it may seem, no X-ray photographs appear. Pathology is therefore well expressed didactically, but we fear the absence of the X-rays themselves is a glaring want.

For one with some knowledge of the subject, much can be learned from the text and illustrations, and to those desirous of a working knowledge of the specialty, it becomes a handy reference.

MILTON G. WASCH

The Nervous Patient. A Frontier of Internal Medicine. By Charles P. Emerson, M.D. Octavo of 453 pages. Philadelphia, J. B. Lippincott Co., 1935. Cloth, \$4.00.

While this book is neither fish nor fowl, it is in many respects a highly palatable dish. The author himself calls his work a "frontier of internal medicine," regarding all neurotic ills as somehow rooted in or-

ganic disturbances, and most organic diseases as largely dominated by nervous mechanisms. It is true that, if you wait long enough, even neurotics are going to die from tuberculosis, cancer and heart disease. But it is sophistical to imply that these diseases should have been suspected or discovered behind the nervousness. The continued emphasis which the book lays on the human inter-relationship between organic and psychic influences is refreshing and valuable, coming from a responsible internist.

The book is dedicated to the practitioner and it is clear that the general physician may find the greatest profit in it. The arrangement of the material is decidedly unconventional and adjusted to fit problems and minor questions as they are likely to arise in the busy practitioner's experience. There is no rigid attempt to line the wealth of modern research detail up in literary fashion. The arrangement of the chapters makes the work a handy and practical reference of sensible proportions. An inspection of details, such as therapeutic suggestions or theoretical backgrounds, reveals the author as eminently sane and devoid of frills.

The first half of the book covers practically all of internal medicine in concise chapters which contain no interminable discussions. These sections serve best to bring one's understanding of problems up to date. The remainder of the book is given over to problems with which the practitioner is daily faced, but never reads about in his texts: marriage, all kinds of named and un-named neuroses, birth-control, diseases of the brain, eugenics, etc. While these sections are not for the neuropsychiatrist, they are well done for this type of book.

SAM PARKER

A Synopsis of Medicine. By Henry Letheby Tidy, M.D. Sixth edition, Revised and enlarged. Duodecimo of 1112 pages. Baltimore, William Wood & Co., 1934. Cloth, \$6.00.

This is a concise and inclusive review of a system of medicine. The general arrangement of the text follows that of Osler's "Principles and Practice of Medicine," but is necessarily written in a very abbreviated style. The new edition has undergone extensive changes, especially in the sections devoted to Diseases of Deficiency, Endocrinology and Diseases of the Bones. The book provides an excellent reference for hasty reviews of almost any subject in internal medicine, but of course, it will not replace a standard textbook of medicine.

RUDOLPH CHESSE

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